

# MacWEEK

\$3.50

04

Volume 1  
June 1, 1987

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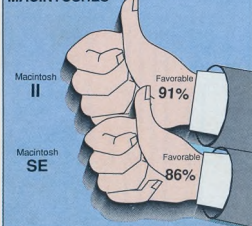


"Computers are becoming what they were supposed to be: information appliances."

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### READER OPINIONS OF NEW MACINTOSHES



Source: April 1987 Creative Strategies/MacWEEK



Will Apple take a risk on RISC? As with the "Open Mac," Apple watchers may find the answer on vanity license plates.

## Apple weighs RISC technology for next generation of computers

BY JOHN MARKOFF

Special to MacWEEK

CUPERTINO, Calif. — Apple Computer Inc.'s next generation of computers may be based on a radically new microprocessor architecture that could improve performance dramatically over today's Macintosh designs.

Such computers would be built around microprocessors combining elements of both Reduced Instruction Set Computer (RISC) and multiprocessor design onto a single silicon chip. Apple's advanced development team is now at work using its Cray XMP supercomputer to simulate the design of the new chips.

Jean-Louis Gasee, head of the Macintosh II design team and Apple senior vice president of research and development, says Apple has a RISC project but refuses comment on whether a product based on the technology is in the works.

"It's a very popular topic at Apple these days, but whether or not we will use it I can't say," Gasee says. "We've been working on RISC a long time, but we need to learn more about it and

See RISC on Page 6.

## User groups dealt first look at 'Wild Card'

BY JERRY DANIELS

Special to MacWEEK

CUPERTINO, Calif. — Corporate user groups and education consortiums are getting their first looks at Apple Computer's new database construction set, code named Wild Card.

Rumors of new, revolutionary software under development by Bill Atkinson, Apple Fellow and author of MacPaint, have circulated among Macintosh developers for the past six months.

Developers and corporate users close to

Apple have been told that Wild Card is an "application generator." Others were told it was a database manager. The sources agreed that Atkinson has made liberal use of the Paint tools found in MacPaint 2.0, now code named Hack Paint.

Wild Card's future seems as unsure as its name. Reportedly, Atkinson is pushing Apple to bundle Wild Card free with every Macintosh. But Apple has yet to decide whether it will be in a giving mood, and William Camp-

See WILD CARD on Page 6.

## Sans name or new products, Apple's software spinoff searches for its identity

BY JIM BEAVER

MacWEEK Staff

CUPERTINO, Calif. — Ankle deep in lawyers, new names and the search for a building, William Campbell took some time last week to discuss his newest challenge with Apple Computer Inc. — spinning off an independent software company from its famous parent.

No name for the new company has been approved yet, although certainly not for lack of trying.

As many as 15 names have been run past the lawyers, but each was turned down because it was someone else's property.

Campbell, who will be president and chief

operating officer of the new firm, says he hopes to have a name and logo set for the fall season. Initially, he says, "We'll be relying on

See SPINOFF on Page 6.

## Hewlett-Packard readying Mac version of scanner

BY JIRI WEISS

MacWEEK Staff

PALO ALTO, Calif. — Hewlett-Packard plans to introduce a Macintosh version of its desktop document scanner in August or September, according to the firm.

The \$1,495 ScanJet, HP's first, is capable of scanning documents at a maximum resolution of 300 dots per inch — the same resolution as most scanners available on the market.

The move represents an effort on the part of HP to capture part of the huge Mac market in desktop publishing, says Ed Wong, research analyst with Dataquest Inc. Competing companies include Abaton Technology Corp., DEST Corp., Microtek and Thunderware Inc.

ScanJet's flatbed design lets users scan a broad range of documents, from photographs to books with an image area of 8.5 by 11 inches. The scanner, based on an engine from Canon, can input a full-page image at 300 dpi and store the data on a hard disk in 20 seconds. An optional \$595 document feeder lets users feed up to 20 pages automatically and scan legal-size documents.

The HP scanner can recognize up to 16 different gray levels. The availability of what is called "gray scale" gives users more flexibility in scaling drawings and producing halftones, says Jeremy Jaech, vice president of engineering at the desktop publishing software

See SCANNER on Page 25.

# Connectivity showdown to highlight COMDEX

BY JIM BEAVER

MacWEEK Staff

ATLANTA — A preview of the coming battle for the connectivity marketplace will be one of the highlights at the COMDEX/Spring '87 Conference this week.

A panel on Macintosh/IBM connectivity will feature different views of what users want to share and the best way to get it to them. The panel, "Macintosh-IBM/DEC Connectivity: Wedge into the Business, Scientific Markets?" will be Tuesday from 2:15 p.m. to 3:45 p.m.

(For a preview of products for the Macintosh at Comdex, see Page 15.)

Networking products from a number of companies, including Dayna Communications Inc., Digital Communications Associates Inc. and AST Research Inc., will be demonstrated.

"The issue is no longer IBM vs. Mac," says Ash Jain, a panel member and Irvine, Calif.-based AST Research's vice president of the Apple Enhancement Production Group. "The issue is working together. So communication between the two leading standards is very important."

The Mac's toehold in the business world got the connectivity issue rolling, and Apple's introduction of the open Mac II is expected to add momentum to that drive, according to Peter Ting, a securities analyst with Davis, Skaggs, a division of Shearson Lehman Bros. Inc., in San Francisco.

Now the question is one of means: What level of connectivity does the market most want? That translates to which product gets the market jump, which means Tuesday's panel should be interesting, says panel member Bill Sadleir, chairman and CEO of Dayna.

Jan Lewis, president and chief analyst of the Palo Alto Research Group in Palo Alto, Calif., will moderate the panel.

Connectivity takes place on various levels, according to Lewis. One level is file compatibility that is transparent to the user. At this level, the user would, for example, be able to take the Lotus 1-2-3 file he had on his IBM computer and put it into a Mac, where it would appear fully translated into Excel.

Dayna's Sadleir says he will showcase an



external disk drive for the Mac that will do just that. He says his new product reads and writes on IBM disks and supports all IBM disk formats.

"It can support any combination of disks and the Mac is blind to the fact that it's an IBM," Sadleir says.

"This is a true file-sharing device," he says. "The technical differences are no longer an issue." Dayna hopes to begin shipping the product, called DaynaFile, July 13.

But technical differences may be an issue for the user who wants to run an IBM program on the Mac. That would require a coprocessor like the Mac286 that panel member Jain says AST plans to begin shipping in August.

For the user who constantly needs to switch files, Jain says, "The coprocessor is the best solution (to the connectivity problem) because you have an application that creates a data file common to both environments."

Sadleir, however, says he doesn't think so. He calls the coprocessor an impulse buy. "People don't care about running IBM programs on a Mac," he says. "They want data sharing. IBM compatibility really means data-file compatibility."

Another potential solution will be offered by Digital Communications, which will demonstrate MacIRMA, a new IRMA board that will allow file transfers between the Mac SE and Mac II and the IBM 3278 and 3279 mainframe terminals, according to Tom Lenahan, Digital Communications' project manager.

Sadleir says the next breakthrough will come at the network level — Apple's AppleTalk communicating with Novell Inc.'s NetWare. He predicts that will happen by early next year.

Another panel will discuss "new opportunities" in Mac software on Monday. In a word, says panel moderator Heidi Roizen, the opportunities are "endless."

"The Mac II is a powerful tool just waiting for someone to exploit it," she says. ■

## Ash Jain resigns as head of AST's Apple Enhancement Group

IRVINE, Calif. — Ash Jain, who spearheaded AST Research's Apple Enhancement Group and oversaw development of the Mac286 coprocessor, resigned last Friday to become an independent marketing consultant and analyst.

Michael Zachan, who has been running the group since March, will take over Jain's post. "I'm an entrepreneurial-type of individual," Jain says. "I like to work in small groups."

He says AST's Apple group, which he founded in 1984, had grown to the point where it needed an administrator more than an innovator. Jain, 42, says he first approached AST about resigning last November as vice president of AST's Apple Group, but the "transition would have been too difficult" then because the management team was not in place.

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## Large-capacity Priam disk drives set to ship

BY GILBERT DAVIS

Special to MacWEEK

SAN JOSE, Calif. — Priam, a major hard-disk manufacturer in the MS-DOS world, will enter the Macintosh market this week with four external disk drive systems, ranging in capacity from 40 to 230 Mbytes.

The MacDisk family of Small Computer System Interface (SCSI) drives features average seek times of 20 to 29 milliseconds. All drives offer voice-coil and closed-loop head positioning, automatic head parking and MTBF (mean time between failures) ratings above 30,000 hours, according to a Priam official.

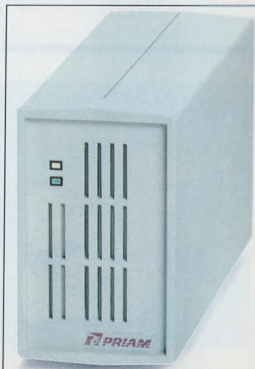
Each unit includes a Priam hard disk, a controller card, a power supply and a fan enclosed in a vertical box that sits beside a Macintosh. Suggested retail prices for the SCSI memory systems are \$1,895 for the EM40, \$2,295 for the EM65, \$2,695 for the EM100 and \$3,995 for the EM230 drives.

All MacDisk drives are formatted and include utility software. MacDisk systems plug directly into the SCSI port of Macintosh Pluses, SEs and IIs. A second SCSI port on the MacDisk can be used to daisy-chain to other SCSI peripherals, like additional hard disk drives. A MacDisk's logical address is set with an external, rotary switch instead of the internal switches or software configuration used by many other drives. All products also feature a one-year warranty.

Only the 40-Mbyte MacDisk is a completely new product for Priam. It is a 3.5-inch drive with three platters and an integrated SCSI controller card using a chipset from Adaptec of Milpitas, Calif., a company spokesman says.

The other three MacDisk units feature 5.25-inch drives now used in MS-DOS subsystems, coupled with SCSI controller cards from Adaptec. Even those drives will soon receive integrated SCSI controller cards engineered by PRIAM, according to the spokesman. ■

PRIAM's new hard-disk drive system for the Mac.

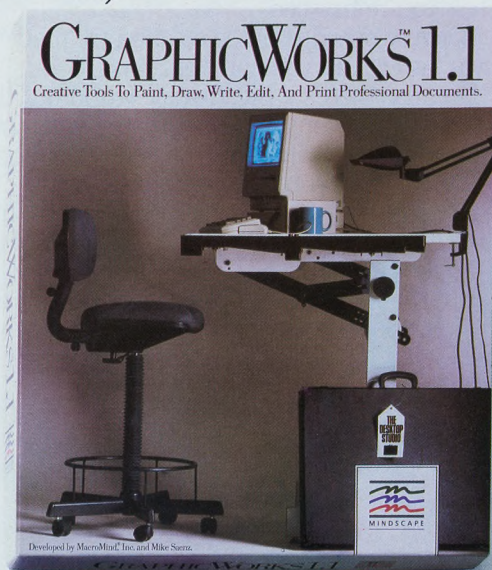


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*Charles Simonyi, Chief Architect, Applications, Microsoft Corporation.*

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# To create the most ever devised. I don't succeeded."

## Introducing Microsoft Word 3.0

MICROSOFT WORD VERSION 3.0 is a powerful word processing program that offers an unprecedented range of choices for the look of your document. With Word, you can mix graphics and text, within a paragraph or side-by-side. It provides built-in support for snaking and side-by-side columns. And you initiate automatic

hyphenation, for a tighter, more professional appearance.

For even more sophisticated capabilities use a page layout program, such as PageMaker 2.0 from Aldus. PageMaker can read and write Microsoft Word files, and you can easily transfer formats between them.

Percentage of Computer Usage



Microsoft  
WORD

## RISC

*Continued from Page 1.*

this is not the time for precipitous moves."

Apple's long-range RISC project comes at a time of new interest by manufacturers in developing low-cost, high-performance RISC workstations. Sun Microsystems Inc. of Mountain View, Calif., is releasing a RISC version of its workstation for introduction this summer, and Hewlett-Packard of Cupertino, Calif., is reported to have a low-cost workstation version of its Spectrum RISC architecture in the works.

RISC proponents say simplifying microprocessor design allows computers to execute basic functions faster, greatly boosting performance.

If the multimillion dollar gamble pays off, a RISC microprocessor could allow Apple to leapfrog the competition with a PC, not two or four times faster than today's 32-bit microprocessors, but 20 or 50 times faster—power comparable to IBM's Sierra-class mainframes.

Apple's RISC gamble is an important one because personal computer designers are beginning to bump against fundamental limits. Quantum leaps in performance will be much more difficult to extract in the future.

In the past, simply increasing the bandwidth of a microprocessor chip—from first 8, then 16 and now 32-bit microprocessors—ensured dramatic performance gains. Today, semiconductor engineers gain speed by "shrinking" microprocessors, placing transistors closer by

using advance fabrication techniques.

RISC advocates say they can make another dramatic jump in speed by simplifying processor design. They say Complex Instruction Set Computers, like Digital Equipment Corp.'s VAX line of computers, burden computer performance with unnecessary features.

RISC designers say computers spend most of their time executing simple tasks repetitively. To boost computer speed it is best to strip away frills and concentrate on executing the most basic functions as fast as possible.

Apple has yet to produce any working prototypes of a RISC chip. Just as giant aerospace companies such as Boeing and McDonnell Douglas use supercomputers to simulate the performance of their new jets before they ever begin production, Apple is using its Cray to model a RISC computer entirely in software. The computer architecture Apple is simulating was developed in IBM's research labs and was later picked up by computer scientists at the University of California at Berkeley and Stanford University in Palo Alto, Calif.

More recently, several commercial computer designs based on RISC principles have appeared: Small Silicon Valley companies have adhered more or less to the RISC philosophy.

They have been joined with RISC-based machines by major corporations such as IBM and Hewlett-Packard. IBM's PC RT includes

## RISC: The definition you won't find in Webster's

What RISC actually is remains a matter of intense debate. But now that RISC has become a new buzzword associated with greater computer speed, virtually everyone is trying to jump on the bandwagon.

David Patterson, a computer scientist and RISC designer at the University of California at Berkeley where the term was coined, says he recently attended a computer science symposium where a Motorola spokesman argued that the company's 68030 chip was designed along RISC lines.

Patterson, an industry consultant who has been a leading RISC defender in the RISC debates, says he feels that such a designation is a misuse of the concept. However, he says there are underlying RISC principles.

First, and most obviously, RISC machines have simple instruction sets. Machine instructions—or assembly language—are the basic commands with which programmers use to command the processor.

Second, RISC designs must execute one instruction for each processor clock cycle.

This is in contrast to CISC designs based on

microcode, an underlying set of instructions deep in the bowels of a microprocessor, that may require more than a dozen machine cycles for instruction.

Third, a RISC machine requires a fixed format for instructions. This simplifies the circuitry necessary for decoding the instructions. Only 5 percent to 10 percent of chip surface area is devoted to control functions in the Berkeley graduate student RISC designs, while it takes 50 percent to 60 percent of available surface area in the Motorola 68000 or the Zilog Z8000.

Finally, RISC design requires a load/store architecture. This means that the only instructions that affect the computer's memory are simple ones that move data between memory and the microprocessor register set.

As a result, Patterson says complexity is shifted from hardware to software. RISC machines require more complex compiler programs that translate higher level computer languages into machine instructions. Programs, therefore, are larger but significantly faster, he says. ■—By John Markoff

## SPINOFF

*Continued from Page 1.*

Apple, but the sooner we can pull out our tentacles, the better for us and the community.

"We want to get set up as soon as possible," Campbell says. "But we have to be very careful that we set it up right. It has to be kept at arms' length."

The goal, Campbell says, is making believable Apple's strategy of spinning off the new company, which is that the new firm be truly independent. The split would happen "a little bit at a time," beginning with marketing and packaging and then manufacturing. Last to be split off would be distribution and sales.

For the rest of the software community, the experience is a bit like having a baby—it's fun to look at, but you worry about it a lot.

"They've asked us to think of them as another competitor in the software community," says David Winer, president of Living Videotext of Mountain View, Calif. "But we don't know what they stand for or what they intend to do."

And that is precisely what the software community is waiting to see: In which direction will Campbell's new baby crawl?

The company could develop software to support desktop engineering, says Jeff Raikes, director of applications for Microsoft Corp. Or, he says, "They may develop software to support the Macs, or the company may choose to compete with us in office productivity."

Campbell is not saying. No long-range planning will occur until his management team is in place, he says, possibly this month.

The initial problem the new company faces, Raikes says, is that the products with which it comes into the market are relatively old and have not kept up with improvements.

Campbell disagrees, sort of. "I wouldn't term them aging," he says. "I'd say they've been broadly accepted in the market." The software Apple now markets will remain the new firm's focus for the foreseeable future, he says, which means he has no plans to develop or buy software for other systems.

That decision could affect the new company's chances for success, says Peter Ting, a securities analyst with Davis, Skaggs, a division of Shearson Lehman Bros. Inc. of San Francisco. "They need to go beyond Apple if they want to be a major force in software. Their long-term viability hinges on their ability

to address both sides of the PC market, IBM and Apple."

Ting says the spinoff was dictated largely by politics. The company's role in developing programs for its pioneering technology had created animosity among some of the very people it needs most, the third-party developers. They made it known to Apple that its presence in the software community made for an uneven playing field, Ting says. The spinoff takes Apple out of a ball game into which its hardware innovations forced it in the first place.

Also, Apple decided it could not "place its faith entirely in third-party developers," Ting says. As recently as two years ago, Apple stock was selling for as little as \$14 per share, he says, largely because of market concerns that innovative applications were aimed at IBM.

"If they come on strongly, they could really affect the second-tier publishers," says Heidi Roizen, president of Mountain View, Calif.-based T/Maker Co. But if the company doesn't find some way to "turn on the heat," she says, it could end up having no affect at all.

Nothing hot is on the horizon, Campbell says, but he repeated Apple's intent that it has the ability to acquire outside products. "What we choose to develop and acquire will further define our marketing strategy."

Whichever direction the new company takes, it comes into the market with large and immediate clout. This is, after all, Apple, Roizen says.

"At some point we'll end up competing with them, I've no doubt about that," says Winer. ■

## WILD CARD

*Continued from Page 1.*

bell's still unnamed Apple software venture is another option for distributing the unreleased program.

Sources say Wild Card resembles a simple database manager with paint tools. Help files and a Card Ideas file turn Wild Card into an artificial-intelligence-like programming environment, seemingly limiting it to database design, searching, sorting, printing and reporting uses.

Corporate programmers and computer educators who have seen Wild Card recognize a similarity to Smalltalk, an AI programming language. Considered by many to be the parent of the Mac interface, Smalltalk, created at Xerox's Palo Alto Research Center during the latter half of the 1970s, pioneered the use of windows, pop-up menus and a mouse.

Wild Card's effects on product developers and electronic publishers serving corporate, educational and scientific markets may be significant. Observers believe Wild Card incorporates technological breakthroughs that will make developers rethink ideas about data compression, natural user interfaces and optical disk storage technology. But the new database product also may be the first of many difficult choices for Apple's new software venture and Campbell, its president.

"Will Apple market Wild Card or will they leave that to Bill Campbell," asked one developer. "If Apple takes the product, will it be bundled with its (new) machines as reported in rumors prior to the new software company announcement?" ■



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MacWEEK (ISSN 0892-8118) is published weekly, except for two weeks at year-end, by MacWEEK, Inc., a subsidiary of Patch Communications, 5211 S. Washington Ave., Tinsville, Fla. 32780. Single copy price including postage: \$5. One-year subscription rates: U.S. \$75, Canada/Mexico US \$150, International: US \$150 (airmail). All orders must be prepaid. Second-class postage pending at San Francisco, Calif., and at additional post offices.

POSTMASTER: Send address changes to MacWEEK, 525 Brannan St., San Francisco, Calif. 94107. Please allow five weeks for order and address change processing.

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## Varityper laser printer moves out at 600 dpi

BY CLIFF LEHMAN

Special to MacWEEK

EAST HANOVER, N.J. — The first 600-dot-per-inch (dpi) commercially available laser printer capable of near-professional quality typesetting is set to be shipped June 1 by Varityper, a division of AM International.

The VT-600 supports Postscript, Adobe's page description language, and is Macintosh compatible and comes ready to plug into AppleTalk networks.

Priced at \$18,750 and with twice the resolution of most available laser printers, the VT-600 is the first step toward filling the gap between 300-dpi laser printers and expensive typesetting machines, the company says.

Most laser printers on the market today are 300-dpi machines, including Apple Computer Inc.'s LaserWriter, and are priced from \$2,000 to \$5,000. Traditional phototypesetters with 635- to 2,400-dpi resolution begin at \$40,000. A laser printer with 600-dpi will satisfy the needs of 60 percent to 70 percent of professional users, according to Frank Romano, editor and publisher of



COURTESY VARTYPER

The Varityper VT-600 is capable of near-professional quality typesetting at a much lower price.

TypeWorld newsletter.

The VT-600 includes a 20-Mbyte hard disk, with 10 of those megabytes designed to be a font cache. The font cache allows the machine to save translations of fonts, thus saving the translation time in successive uses of the same fonts. The VT-600 also has 6 Mbytes of RAM and uses the new Atlas 68020 controller.

The VT-600 comes with nine fonts in ROM and is compatible with all Adobe Systems Inc.'s fonts. In addition, Varityper,

in cooperation with Adobe, is reading its own library of 1,400 typefaces for use with the printer.

The printer's output is 10 pages per minute. Company representatives say that because of the VT-600's large font cache capabilities, the machine will print complicated pages faster than competitive laser printers.

The VT-600 is aimed at both professional users and office situations where several workstations use the same printer, according to company representatives. ■

## Jasmine will show 10-Mbyte removable cartridge drive at COMDEX

SAN FRANCISCO — Jasmine Technologies Inc. will demonstrate a 10-Mbyte removable cartridge system at this week's Comdex/Spring '87 that the company says will bring additional capability and flexibility to the Macintosh line.

The high-speed Small Computer Systems Interface (SCSI) storage device is priced at \$999 and will be available June 15.

According to the company, the Jasmine MegaDrive will allow users to change 10-Mbyte cartridges as easily as floppy disks, providing extra data protection when used as a backup drive and extra security when used as the principal storage medium.

The MegaDrive's MegaFloppy removable

cartridge uses the same flexible media as a standard floppy disk but is encased in a hard, protective shell. The removable cartridge is similar to a floppy disk in that it is portable, expandable and easy to use, but the company says it is more reliable than similar products already on the market.

The MegaFloppy has a 65-millisecond average access time and the ability to store approximately 5,000 pages of information on a cartridge.

The cartridge drive is designed for applications requiring large memory files, such as desktop publishing, CAD/CAM and accounting. ■

## Radius to deliver Plus accelerator, 15-inch SE monitor

SUNNYVALE, Calif. — Radius Inc. will start shipping this week a 68020-based accelerator board for the Macintosh Plus and a high-resolution 15-inch monitor for the Macintosh SE. A version of the accelerator board for the SE will ship in July.

The \$995 Radius Performance Accelerator, which the company says makes the Plus four

times faster, runs at 16 MHz and employs a 32-Kbyte RAM hardware memory cache.

The 1,995 Full Page Display (FPD) works with the Mac's display, allowing users to view a full 8.5-by-11-inch document on the FPD while keeping other documents, such as Desk Accessories, in view on the SE screen, according to Radius. ■

## SuperMac to ship 40-Mbyte tape backup for Plus, SE

MOUNTAIN VIEW, Calif. — SuperMac Technology will start shipping next week its 40-Mbyte streaming tape backup for the Macintosh Plus and SE. Also shipping is a unit that combines the same tape drive with a 40-Mbyte hard disk.

The pocket-sized \$1,299 tape backup, called DataStream, stores data onto DC-2000 tape cartridges from 3M Corp. of Santa Clara, Calif. DataStream appears as an icon on the

Mac desktop and files can be added and deleted to it using the same procedure as with a hard disk or floppy.

A combination unit, the \$2,599 DataFrame XP 40 + 40 integrates a tape backup with a 40-Mbyte hard disk drive. The DataFrame XP 40 + 40 comes with SuperSpool and SuperLaserSpool printer spooling programs for the ImageWriter and LaserWriter printers. ■

## HP jumps into high-end workstation battle with new RISC designs

BY CLAIR WHITMER

MacWEEK Staff

CUPERTINO, Calif. — In an effort to jump into the higher-end workstation battle currently dominated by Apollo and Digital Equipment Corp., Hewlett-Packard has released three new technical computers and cut prices on its business machines.

The new products include a machine nicknamed the "superworkstation," a computer aimed directly at the desktop-engineering and scientific market, which is now led by Sun Microsystems Inc. and Silicon Graphics Inc., both of Mountain View, Calif.

All three of the new HP 9000 line are partly based on reduced instruction set computing (RISC) technology, according to HP representative Jerry Gross.

HP developed its RISC system under a five-year program, dubbed Spectrum. The company has poured \$250 million into the program. The new computers, including the top-of-the-line superworkstation Model 825SRX, are expected to be the long-awaited payoff.

The Model 825SRX includes capabilities for three-dimensional interactive graphics and operates at 8 million instructions per second.

In addition to these new product introductions, the second phase of the attack on the IBM market involved reducing the price of HP's Series 930 business machine by \$45,000. It should be available in August. ■

# Illustrator finds way into business

*Adobe Systems' new graphics package gains early popularity*

BY STEVE CUMMINGS

Special to MacWEEK

Released only a few weeks ago, Adobe Systems Inc.'s new graphics package, Illustrator, is already finding its way into many corporate graphic arts and communications departments. Although some microcomputer managers have doubts about Illustrator's utility in a business setting, others have enthusiastically adopted the new program from the Palo Alto, Calif.-based company for applications such as in-house report writing, technical illustration and advertising.

Key to Illustrator's early popularity, users say, is a sophisticated set of software tools (for drawing screen images and for manipulating text) and its ability to produce extremely high print quality on any device compatible with Adobe's PostScript page description language (from an Apple LaserWriter to a 2,450-dpi Linotronic 300 laser typesetter).

These features have led Government Systems Corp. of Westborough, Mass., a subsidiary of GTE, a large telephone and electronics firm, to choose Illustrator as an essential element in the firm's graphic arts strategy. According to Russ Hall, manager of communication services at the company, the combination of the forthcoming Macintosh II and Illustrator will make buying a much more expensive dedicated-graphics workstation unnecessary.

"We are anxiously looking forward to our test model of the Mac II, and our first application for it will be as an Illustrator workstation," Hall says. "We had budgeted \$60,000 for a good workstation, but it has been very difficult for us to justify spending that much. Now we can do the same thing for 20 percent of what we originally planned to spend."

Even before the Mac II arrives, Hall's department has already begun using Illustrator for a wide range of applications, he says. "We do 10,000 drawings a year, including milestone charts, organization charts, schedule flows, software flows and simple-minded drawings. We are also getting into illustrations for technical manuals."

"Illustrator does an incredible job with all of this work," Hall says. "The only other thing I wish it had is true 3-D." To display and store images, older Mac drawing programs, like

MacPaint, rely on a combination of bit-mapping, in which each screen pixel is represented in the image file, and object-oriented graphics, in which shapes are represented by mathematical descriptions, according to Adobe.

In contrast, Illustrator employs the object-oriented method exclusively, using the text-based PostScript language to represent images. While the printed quality of a bit-mapped image cannot exceed the original resolution used to produce it, any PostScript-compatible output device can print an object-oriented image at the device's maximum resolution.

"We output on everything from a Linotronic 300 down to a LaserWriter," Hall says. "It is a real advantage to be able to get high-quality output from the same file on any printer or typesetting machine."

In addition, says Hall, the text-format PostScript files are easy to transfer to other computers for distribution or storage. "We can send an image over a LAN or to our VAX as easy as any other file."

Similar factors have convinced the New York Times to convert to Illustrator for the production of weather maps that appear in the newspaper, according to Gary Cosimini, senior art director for operations and technology at the Times.

When the Mac-based system for weather maps was created at Pennsylvania State University, says Cosimini, preliminary geographic maps were drawn in Illustrator by tracing scanned maps and stored as stock files. Each time a new map is produced, precipitation patterns and other graphic weather information are added to one of the stock maps, either by drawing the patterns in directly or by drawing them on a paper map and scanning in the image as a template.

When the map is complete, the PostScript file generated by Illustrator is sent to the paper's headquarters using Red Ryder, a popular shareware telecommunications program, and printed with "spectacular" results, according to Cosimini.

Although the Macintosh was already being employed to create some graphics output before Illustrator was adopted, the Times had

Illustrator can produce high-print quality on any PostScript-compatible device.



Adobe's Illustrator is finding its way into corporate graphic arts and communications departments.

not committed itself to the Mac or to PostScript before Illustrator's release, Cosimini says. Now, in addition to the weather charts, the Times will be using Illustrator for other charts and illustrations in the newspaper, including stock market tables, as well as for forms used internally at the publication.

"The Mac is the first drawing computer we were happy with, and Illustrator is the first piece of software that we have had enough confidence in to invest serious programming time," says Cosimini. "For one thing, Illustrator is a lot more powerful than other drawing programs, almost on the level of a CAD (computer-aided design) program. It allows one to draw very complex curves and edit them spectacularly, and it is pretty good at typography, too."

Illustrator has also been pressed into service at Apple Computer itself, where the program handles a variety of applications, according to Hugh Dubberly, director for computer graphics in Apple's Creative Services department. For example, says Dubberly, "We are in the process of using Illustrator to create front- and three-quarter-view drawings of all of our products. We are putting them out on a network so our sales force can download them when they need to illustrate a configuration they are trying to describe or when they are putting together a proposal."

Apple also uses Illustrator's graphics and text capabilities to produce brochures and posters for company events and programs, Dubberly says. "Illustrator has turned out to be an excellent tool for designing logos and symbols and that sort of thing. It is also very good for setting type in circles or curves, things a standard page layout program cannot do. We have even done some type design in the system for headlines."

While Illustrator appears to be gaining fast acceptance at companies such as GTE and Apple, not all corporate users are as enthusiastic. At General Electric's department of corporation information technology, the Bridgeport, Conn., conglomerate's main microcomputer

support office, Illustrator has been evaluated but has not been adopted.

"It provides some rather interesting features, but it just does not seem applicable for the things most businesses do," says Price Collins, program manager at the department.

"In a business environment, one rarely goes to great lengths for reports or memos, or even for presentation graphics. Out of the very small percentage of work that does use artistic drawings, most of the time something much simpler, like MacDraw, would suffice. On the other hand, if I am doing exacting technical illustration, I would probably use a CAD/CAE type of package where I could easily produce exactly accurate dimensions, rather than depending on by guess and by golly," he says.

Although the appropriate role of sophisticated microcomputer-based illustrating software in the typical corporate environment may not be settled immediately, such products have a more obvious place in businesses with a strong focus on commercial art. For example, Multi-Ad Services Inc. of Peoria, Ill., a leading supplier of syndicated art, has switched to Illustrator and PostScript to produce and store all the product illustrations and theme art that the firm provides to advertisers, retailers and corporate art departments. Multi-Ad Services is distributing the images on a subscription basis as PostScript files on CD-ROM discs.

In addition to the benefits mentioned by other Illustrator users, Roy Endres, vice president of sales and marketing at the firm, says a PostScript image file produced by the program is as little as one-tenth the size of the same image stored in a bit-mapped format file. Endres agreed with Collins that some corporate art departments need illustrations only irregularly. He suggested they may be better off buying images from a firm like Multi-Ad.

On the other hand, users like GTE's Hall are convinced that Illustrator has a significant role to play in filling many corporate graphics needs. For his company at least, Illustrator is already proving itself to be a serious business tool. ■



## Newspapers can receive art for ads on videodisc

BY JIRI WEISS

MacWEEK Staff

PEORIA, Ill. — Newspapers, printers and retailers can now speed up their ad layouts by subscribing to a quarterly service that delivers a CD-ROM videodisc with hundreds of product illustrations — anything from Coca-Cola bottles to pork chops — as well as theme art for different occasions, such as a drawing of the Liberty Bell for the Fourth of July.

The \$200-a-month service, called Kwikiee INHOUSE Graphics Services from Multi-Ad Services Inc., an Apple value-added reseller, is the first such CD-ROM product available for the Mac, according to Martha Steffen, Apple's CD-ROM evangelist, who acts as a liaison with CD-ROM developers.

Multi-Ad Services uses Adobe's Illustrator to create object-art vectored images rather than bit-mapped images; a circle, for example, is represented as a formula rather than an image composed of dots. This allows Multi-Ad to

pack 225 theme-art illustrations and 100 brand-name product illustrations on its first disc.

Vectored art also allows the art to be scaled or reproduced on any PostScript device with any amount of definition, according to Roy Endres, the company's vice president of marketing. Users can print out the art on a LaserWriter with 300-dpi resolution or at the far higher resolution of typesetting machines.

Multi-Ad Services offers a complete ad layout system that can be used with the subscription service. The \$15,000 system includes a Macintosh SE with a 20-Mbyte hard disk, a large monitor from either Radius Inc. or SuperMac Technology, a modem, an Apple LaserWriter, a CD-ROM drive from LoDown and a modified version of the publishing package XPress from Quark Inc.

In addition to the subscription service, Multi-Ad will design custom art, such as logos, and transmit it to customers via modem for a fee, Endres said. ■

## T/Maker offers site licensing to universities

ITHACA, N.Y. — Cornell University recently signed the first "blanket site licensing pact" offered by T/Maker Co. of Mountain View, Calif.

With the new site licensing procedure, universities such as Cornell will get software designed exclusively for their academic needs at "dramatically reduced prices," according to T/Maker.

T/Maker expects the procedure to encourage campuswide use of its WriteNow program. The word processing program, which works on all Macintosh computers, has a list price of \$175; the street price is \$97.

According to a T/Maker spokesman, Cornell will pay an annual fee for the rights to distribute WriteNow to the incoming freshmen class. Other Cornell students and faculty also will have access to the software.

T/Maker says it foresees "blanket site license programs as the industry model for future university software licensing." In addition, T/Maker says an advantage of allowing campus users to obtain the software at the lowest possible price is the elimination of illegal student copying and the establishment of a university-wide software standard.

WriteNow was chosen based on three criteria, said Tom Hughes, Cornell's assistant director of academic computing. He said the software selected must be easy to learn and use with minimal technical support and with the features needed in an academic environment.

WriteNow, developed by NeXT Inc. of Palo Alto, Calif., offers on-screen headers, footers, footnotes, multiple columns, a built-in spelling checker and the ability to place graphic images in a line of text. ■

## Data Tailor shipping upgraded Trapeze spreadsheet

BY JIRI WEISS

MacWEEK Staff

FORT WORTH, Texas — Data Tailor Inc. shipped this week ship an upgrade to its Trapeze spreadsheet that will give users additional graph formats, increased file capacity and the ability to import worksheet files from Microsoft's Excel or Lotus 1-2-3.

The \$295 Trapeze 1.1, which runs on Macintoshes containing 512 Kbytes of memory or more, includes six new chart formats, including polar, area, contour and stacked bar charts. Worksheets can be as large as 40 pages by 40 pages (8.5 by 11 inches) vs. 11 pages by 11 pages in Version 1.0, according to the company.

Release 1.1 includes a tutorial with sample applications for manufacturing and project scheduling as well as portfolio management. The portfolio management application lets users track a portfolio with up to 31 different

spreadsheets that are linked together. One spreadsheet can, for example, be used for stock holdings, another for bonds. Changes in individual spreadsheets are automatically reflected in a portfolio spreadsheet.

Trapeze allows users to combine numerical text and graphic information in a manner distinct from other spreadsheets. Users enter information into blocks rather than rows and columns. The blocks are referred to by name and can be moved anywhere on the page without changing their relationship.

Users can link graphs, such as bar or pie charts, with numerical information so that any change in the numbers is automatically reflected in the spreadsheet.

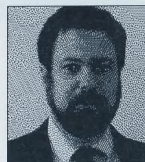
Trapeze includes 127 functions that allow users to perform anything from statistical analyses to linear regressions.

Trapeze 1.0 users are eligible for a free upgrade, the company said. ■

## LAWRENCE MAGID

Often, when I want to send a letter to a company (including those within the computer industry), I ask if I can use MCI Mail or some other electronic service. Typically the answer is "no." Either they do not subscribe to such a service, or, if they do, no one knows how to get it to work.

But when I ask if they have a fax machine,



"Fax machines are becoming a standard for business communication."

the answer is usually "yes." Fax machines are rapidly becoming a standard for instantaneous business-to-business communications.

A fax machine, also known as a telecopier, looks and acts very much like a copy machine, only it is connected to a phone line so that the output goes to another fax machine anywhere in the world. The machines range in price from a few hundred dollars to several thousand. And, unlike most electronic mail services, they are extremely easy to use.

Donald Ryan, an analyst who follows the fax industry for CAP International of Marshfield, Mass., estimates there are about 600,000 fax machines in use in the United States. About 191,000 machines were installed in 1986. He estimates about 250,000 will be sold in 1987.

His numbers confirm my experience. Fax is rapidly becoming a standard for business communications. Not only is fax instantaneous, but it is very often cheaper than overnight delivery services.

It takes less than a minute per page. Using AT&T long distance, a one-minute call from San Francisco to New York costs only 33 cents during the day and 15 cents at night. A call to London can cost as little as 99 cents for the first minute.

While the vast majority of fax machines are stand-alone terminals, it is now possible to install a fax board in an IBM PC. A number of companies, including GammaLink of Palo Alto, Calif., manufacture "fax modems" for the PC. The GammaFax board lets any word-processing program create a text file, which is then converted into a fax-compatible file. Although images can be scanned into the software, the system is text-based.

Advanced Vision Research of San Jose, Calif., packages the GammaFax modem with its own desktop-publishing software, running under GEM. The product also allows an operator to use Ventura Publisher to create documents. Both GammaFax and AVR software can display or print incoming faxes.

The trouble with these products is that they run on the PC instead of the Mac. I am not saying this to patronize my Macintosh audience. I simply believe the Mac is a better platform for this technology.

Imagine a fax modem for the Mac. The Mac's ease of use and integration of text and graphics from virtually all programs could make sending a fax as easy as printing a document.

You could use any program to create your documents and send them along knowing that what you send is what they'll see. A logo and signature could even be scanned or created with a drawing program.

No one has announced a fax modem for the Mac, but my sources tell me that at least two or three companies, including Apple, are working on such a system. LoDown, a Scotts Valley, Calif., manufacturer of scanners and data storage systems, has acknowledged that it is working on a prototype. The LoDown fax modem will probably sell for about \$700 and be compatible with any Mac Plus, SE or II and connect to the Mac via the serial port.

There are some important software considerations for a Macintosh fax system. First, it should allow at least the receiving (if not the sending) of faxes in the background while the Mac is busy doing something else. The IBM PC products I have tested require exiting the application program to run the fax software. Ideally, the modem should be able to receive a fax even if the computer is turned off.

It also would be nice if the fax modem were Hayes-compatible so it could be used for standard communications. Fax machines operate at 9,600 baud, but the modem should be able to drop down to 2,400, 1,200 or 300 baud.

The most critical question for the Mac user is how the system saves and sends images.

Sending a fax should be similar to printing a file. I recommend that "Mac-to-Fax" software include the "Glue" imaging system from Solutions Inc. of Montpelier, Vt. Glue lets the user "print" an image to disk instead of to a printer. It works with any Macintosh application and has its own "Image Saver" printer driver.

The user selects "Image Saver" from the chooser as if it were a printer. Then, when a file is printed, the output goes to a file that can then be sent to another Mac for viewing or printing, even if the other person does not have a copy of the program that created the image. The same technology could be used for sending faxes, according to Tom Evislin, president of Solutions Inc.

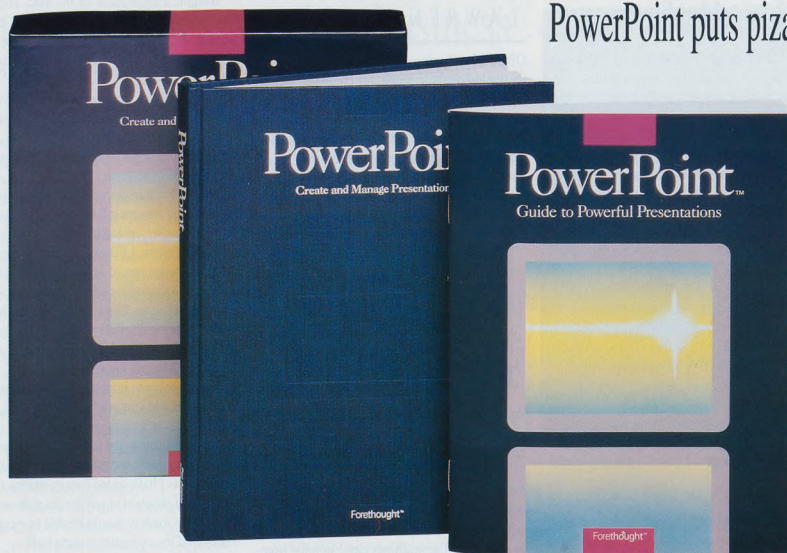
Fax machines print at 200 dpi — a respectable resolution. One of the reasons faxes are usually fuzzy is because of the degradation that comes from the scanning process.

The faxes I've received from PC-based systems aren't quite as good as LaserWriter output (300 dpi), but nevertheless, they are very good.

An incoming fax should, ideally, be a reversible document. At a minimum, it should be possible to manipulate the image with a paint program.

Ultimately, it would be nice to have optical character recognition software, which would allow a user to convert the incoming file to an ASCII document.

But that is a tall order, and I am willing to wait. In the short run, I will settle for a modest goal: Turn all of the world's fax machines into remote printers and scanners for the Mac. ■



## PowerPoint puts pizzazz in presentations

Every working hour of the day, businesses in the United States produce more than 500,000 presentation slides. For this not so inconsequential market comes PowerPoint — an aptly-named presentation package.

PowerPoint features master pages, text and picture blocks, built-in drawing tools and fill patterns, just like PageMaker and Ready,Set,Go! 3.

What it does produce more elegantly is instant shadowed boxes, handout pages and speaker notes.

One particularly innovative aspect of PowerPoint is its slide sorter view. One can rearrange the order of a presentation by cutting and pasting slide miniatures, a very powerful and intuitive method that closely mimics a lightbox. Using the title sorter view, the presenter can rearrange slides by title — a method that resembles outlining.

What's missing? The ability to specify a font is more complicated than necessary. And kerning would be nice for those very critical presentations.

Forethought Inc. (408) 737-7070  
250 Sobrante Way, Sunnyvale, Calif. 94086  
\$395 (list price)



## Peak Systems' Sierra combines disk and tape

Peak Systems recently introduced a new 40-Mbyte hard-disk drive with a 40-Mbyte tape drive combination called the Sierra.

With the increased need for mass storage with secure backup required by corporate Macintosh users, several companies have announced tape-backup units. Peak Systems appears to have beaten Apple Computer Inc., General Computer, SuperMac Technology and a host of others to the marketplace with a unit that, at first glance, seems solidly constructed.

The hard-disk unit is fast and works like a charm. The tape-backup software has not been completed at this writing but is promised for June 1 delivery. The software, which will allow for both image and file-by-file backup is very easy to master. According to Peak Systems, the

tape drive can backup the entire 40-Mbyte hard disk in less than 40 minutes.

When backup is chosen, the tape backup software shows a dialog box in which all drives connected to the system are listed. Backup can be chosen to either backup immediately or at a certain predetermined time.

Utility software included with the Sierra: PeakExpress, a data compression program, and Peak Recover, a file recovery program.

The unit is finished in the now-mandatory platinum finish and comes with a one-year warranty.

Peak Systems Inc. (512) 328-0747  
1201 Spyglass, Austin, Texas 78746  
\$2,995 (list price)

## MacTilt brings you eye to eye with the SE

Ergotron is a company that lives up to its name. MacTilt SE is a new pedestal that brings the Macintosh SE closer to eye level.

This sturdily-built stand also tilts and swivels to provide users with more viewing flexibility.

The 360-degree rotation comes in handy in places — like MacWEEK's offices — where the morning sunshine interferes with the CRT's brightness. A little tug at MacTilt and optimum viewing is restored.

For those who regularly have nightmares of seeing their SE topple, a pair of clips are included to keep the computer in check.

The MacTilt SE naturally sports the fashionable new platinum color.

Ergotron Inc. (612) 854-9116  
1621 E. 79th St., Minneapolis, Minn. 55420

\$89.95 (list price)



PHOTOS BY PAUL MORRELL

# Apple's relationship with dealers improves, but problems remain

BY RICHARD HALSTEAD

Special to MacWEEK

CUPERTINO, Calif. — Relations between Apple Computer and its authorized dealers are more harmonious today than at any time in memory, according to observers both inside and outside of Apple.

"Things are better than they have been in a long, long time," says Doug Beck, owner of an Apple dealership in Dallas. "Apple's support of its dealers is the best in the industry right now."

The "Era of Good Feeling" is still new enough, however, that not all the benefits have trickled down to the end user. Despite new programs to assure that dealers provide adequate service and support, user complaints remain vociferous. According to dealers, the problem of poor dealer support for users grew out of Apple's decision several years ago to launch a national accounts sales operation. By selling directly to end users instead of relying on independent dealers, Apple hoped to penetrate major corporations. The plan backfired. Not only did Apple fail to win over corporations, it angered dealers who claimed it was stealing customers. Eventually, the relationship between Apple and its dealers deteriorated to the point that the company virtually ceased working with dealers on national sales.

In 1985, Apple recognized its mistake and made a new commitment to the dealer channel. "Our primary channel of distribution is our dealer network," says Mary Ann Lettieri, an Apple spokeswoman. "We have a commitment to seeing that those remaining dealers are very strong."

The next year, in an effort to deal with rising user complaints over lack of dealer support, Apple decided to drastically cut back on the number of authorized dealers. Using standards of high-volume sales and strong technical support, Apple reduced its total number of dealers from 2,600 to about 2,000. About 100 of the ousted dealers were outlets of Sears Business Systems.

The weeding-out process was traumatic for dealers because each faced the possibility of

losing its supply of Apple products. "It caused a lot of apprehension," says Beck, the Dallas dealer.

The surgery, however, had its desired effect. The spirits of Apple's remaining dealers are high. Three programs, instituted since the national accounts reorganization, have improved Apple dealers' ability to expand their local businesses.

First, Apple made AppleLink, an electronic mail and messaging system, available to all dealers. AppleLink makes it easy for stores to communicate with corporate dealers and others, as well as to provide store owners with access to a mountain of product and technical information.

Second, Apple created a market development fund to supplement its cooperative advertising fund. The market development fund works much like the advertising fund. Dealers receive a 2 percent discount on all Apple products that they buy. This discount accumulates until it is used by the dealer.

For example, if a dealer buys \$10,000 worth of goods, \$200 is put into the fund. Dealers can use the money to sponsor seminars or other special events to promote Apple products. The only catch is they must get corporate approval before spending it.

Third, Apple created a new position — the business development manager. These managers (Apple will not say how many there are) supervise key retail markets throughout the country. They help dealers develop promotional programs to use the market development fund and to expand their markets and facilitate communication between dealers and Apple, so that when business opportunities arise, the dealers and Apple can move together to take advantage of them.

If Apple has resolved its problems with dealers, the effects of the improving relationship between Apple and its dealers have been slow to reach users.

"I think there is a definite problem at the end-user level," says Ralph Megna, vice president of Renaissance Properties Ltd. in Little

Rock, Ark., and a member of Apple's User Group Council. Many users of Apple products do not receive hardware and software updates, some of which are free, because dealers do not have the time or the desire to keep in close touch with their customers, he says.

Some small independent dealers do not follow up because they do not have the financial resources, but larger dealers, some members of powerful chains, just do not bother because the financial incentive is too small, Megna says.

"I have campaigned both inside and outside of Apple on this issue," says Megna, whose real estate company, which has 15 Macs, is the largest independent Mac user in Arkansas.

"As to service, well, some of our members have been distressed to find that there is no direct support line to Apple," says Leon Ablon,



JONATHAN LEVINE

Leon Ablon, Macintosh consultant

a Macintosh consultant and head of a 1,200-member user group in New York City.

Ablon says Apple customers are referred to dealers for all support questions. He says this system works fine if the customer has a good

See DEALERS on Page 25.

## Aldus' going public sign of industry's maturing

BY KRISTINA SULLIVAN

Special to MacWEEK

Early this month Aldus Corp. will go public, marking a maturation of the desktop-publishing industry as the field continues to boom and analysts raise their growth projections.

"Desktop publishing is a mature market now," says Ajit Kapoor, vice president of electronic publishing market analysis for Dataquest Inc., a research firm in San Jose, Calif. "It is no longer a startup venture type of product."

Dataquest estimates the U.S. market for desktop-publishing systems, including PCs, laser printers, software and scanners, reached \$280 million last year. That market is expected to grow to \$550 million this year and soar to \$2.5 billion by 1990.

Seattle-based Aldus Corp., which began as a small company with a big idea and a handful of cash in 1984, has evolved into an \$11-million firm with OEM agreements with some of the largest computer firms in the world: IBM, Digital Equipment Corp., Wang, Hewlett-Packard and Olivetti.

These OEM agreements indicate that

desktop publishing has been accepted by large firms as a potentially huge market, says Kapoor. "IBM, DEC and Wang are not happy with \$2 million. They spend that on pencils and paper," he says.

Aldus is not the first desktop-publishing firm to take advantage of a ripe market. Adobe Systems Inc. of Palo Alto, Calif., developer of the PostScript page-description language and Adobe Illustrator, a line-art illustration package for the Mac, offered public stock last August.

Interleaf of Cambridge, Mass., makers of Workstation Publishing Software, which runs on Apollo Domain, DEC VMS, Sun Microsystems and IBM PC RT computers, also offered public shares last June.

"The fact that these companies have gone public indicates a seasonality, a certain amount of acceptance, not just hype," says Kapoor.

Aldus has helped shape the desktop-publishing market, as well as benefitted by its growth.

The firm's PageMaker package has sold 60,000 copies, according to Aldus, mostly in

See ALDUS on Page 25.

## Gassee placed in charge of Apple research and development

CUPERTINO, Calif. — Jean-Louis Gassee's tremendous success in getting Apple's Macintosh SE and Macintosh II onto the market has been rewarded with a promotion to senior vice president of research and development.

The promotion was part of a reorganization that brought the company's advanced technology and product development groups together under Gassee's direction. Combining the two groups is designed to assure that "the best new technologies will be incorporated into new and existing products," says Delbert Yocam, Apple's chief operating officer.

"It seemed to make sense for them to have more contact," says Barbara Krause, an Apple spokeswoman. "It should assure a synergy between products that are years out and those that are just a year or two away."

Larry Tessler, vice president of advanced technology, will report to Gassee but remain on the executive staff.

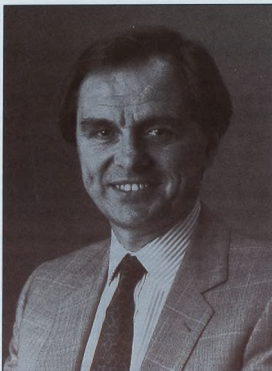
Gassee, 43, has the "unique skill of being able to inspire creativity while meeting product schedules," says Yocam.

William Campbell, who is moving to Apple's spinoff software firm called the promotion and reorganization "a logical move."

"Jean-Louis has done a tremendous job," Campbell said.

Gassee joined Apple in 1981 and served as the founding general manager for Apple Computer France. He was named vice president of product development in June 1985.

Gassee recently published his ruminations on the computer revolution in a book titled "The Third Apple." ■



COURTESY APPLE COMPUTER INC.

Jean-Louis Gassee, Apple's new senior vice president of research and development

## Sun Microsystems agrees to buy supplier Trancept

MOUNTAIN VIEW, Calif. — Sun Microsystems Inc. has signed a letter of intent to buy Trancept Systems Inc. for \$5 million worth of Sun common stock. The agreement should be completed within 30 to 60 days, according to Sun representative Carol Broadbent.

Trancept of Raleigh, N.C., has developed an application accelerator on Sun windows inserted into the Sun workstation's open architecture. The product has not yet shipped.

Broadbent said although Sun has not invested any venture capital in Trancept, the firm has had a third-party supplier agreement with Sun since Trancept was founded 15 months ago. The decision to buy was made because Trancept makes a complementary product. No other acquisitions are planned. ■

## JUNE

**8-10 — Federation of Conferences on Information Services, Washington**

Conference will house five sections, including the National Office Automation Conference, the National Networks Conference and computers in the government sector. It will include information about personal computers, telecommunications, integrated office systems and electronics records management. Contact: Jessica Kubzansky, (617) 358-5301.

**8-10 — International OIS, London, England**  
Optical information systems seminars, including optical disks, CD-ROM, interactive videodisks and CD-I. More than 50 exhibitors expected. Contact: Marilyn Reed, (203) 964-8287.

**8-12 — USENIX Show, Phoenix, Ariz.**  
Two days of tutorials on UNIX software problem solving, a vendor exhibition and a technical program. Keynote address by Steve Jobs, president of NeXT Inc. Contact: USENIX, (213) 592-3243.

**10-12 — MacHack '87, Ann Arbor, Mich.**  
Conference and exhibition featuring 200 Mac software developers and product displays from Mac software and hardware vendors. Includes a preconference tutorial for programmers 8-9. Contact: Expotec, (313) 882-1824.

**10-12 — European Corporate Electronic Publishing Systems Conference and Show, Frankfurt, West Germany**  
This first European publishing systems exhibition will feature European products, but U.S. companies will also be represented. Focus on

desktop publishing for corporations. Apple President John Sculley to speak on corporate desktop publishing. Contact: Interconsult, (617) 547-0332.

**15-18 — Desktop Publishing Forum, New York**  
Aldus and Microsoft sponsor exhibits, workshops and demonstrations for MIS professionals, corporate managers, communications specialists, advertising and public relations firms, small- to medium-size businesses and educators. Contact: (800) 445-4808 for registration information.

**15-18 — National Computer Conference, Chicago**  
Theme will be "Discovering the Power of Information." Contact: NCC, (800) NCC-1987; in California, (800) 228-1064.

**17-18 — Managing Technical Professionals, Atlanta**  
Supervisory skills training for managers responsible for software development projects. Contact: Kelly Bailly, ADAPSO Education Department, (703) 522-5055.

**22-26 — A/E/C Systems '87, Washington**  
Eighth International Computer and Management Show for the Design and Construction Industry. Seminars and tutorials focusing on the use of computers in architecture, engineering and construction. Contact: Sharon Price, A/E/C Systems Inc., (203) 666-6097.

**22-26 — Guidelines' Apple/Macintosh Forum, Washington**  
Concurrent with A/E/C Systems '87. Includes 25 workshops by design and construction professionals, educators, software developers, and hardware and software vendors on the role of the Mac in the design professions. Demonstrations of new Macintosh-related hardware. Contact: Fred Stitt or Linda Torno, Guidelines, (415) 254-9393.

**23 — 14th Annual Financial Forum, New York**  
Software services industry executives will meet with business people to discuss potential investments. Contact: Christopher Carleton, ADAPSO, (703) 522-5055.

**23-24 — Desktop Publishing Forum, Los Angeles**  
Same as June 15 show in New York. Contact: (800) 445-1058 for information.

**29-30 — Fourth Annual Microcomputer Managers Association Meeting and Show, New York**  
Open only to association members and invited guests. Exhibit space for about 100 hardware vendors. Information about joining the MMA or becoming a sponsored show attendee is available from the MMA. Contact: Annie Zdzienak, (800) 237-0316; in New Jersey, (202) 569-6816.

Send announcements to: MacWEEK Calendar, 825 Brannan St., San Francisco, Calif. 94107

# WE HAVE THE BEST VIEW OF THE MACINTOSH WORLD: 1664 x 1200



## S I G M A D E S I G N S

When they say a picture is worth a thousand words, they're describing LaserView™, ultrahigh-resolution large-screen monitors from Sigma Designs.

Available for the Macintosh™ SE and Macintosh II in 15-inch and 19-inch sizes, LaserView provides a 1664 x 1200 on-screen pixel display (equal to 11 Macintosh SE screens). And because

LaserView is a noninterlaced monitor, text and graphics are displayed virtually flicker-free. Even facing pages.

You can select the default display mode of 1664 x 1200 pixels (2,000,000 pixels). Or choose the standard Macintosh resolution of 72 dots-per-inch which yields an on-screen pixel resolution of 832 x 600 (500,000 pixels). You can choose from three cursor sizes and two system font sizes for legibility.

For more information on LaserView, call Sigma Designs today at (415) 770-0100. Or visit an authorized Sigma Designs dealer.

Because for computer-aided engineering, advanced desktop publishing and anything in between, LaserView offers you a totally new point of view.

 Sigma Designs, Inc.  
46501 Landing Parkway  
Fremont, CA 94538  
LaserView is a trademark of Sigma Designs, Inc.  
Macintosh is a trademark of Apple Computer, Inc.  
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# The two PageMakers go head to head

Running the program on the Macintosh vs. IBM's PS/2 Model 60

## BY MacWEEK STAFF

Because of the growing passion for desktop publishing, Apple Computer Inc. has made great strides in recent years in the struggle to wrest a bigger share of the business market from IBM Corp.

Until last January, nothing for the IBM PC could match the combination of Apple's Macintosh computer and LaserWriter printer with Seattle-based Aldus' PageMaker in price or function for desktop publishers.

But with the January release of PageMaker for the new IBM computers and the recent announcement of PostScript support by IBM and Hewlett-Packard, PC supporters are relieved from the tension of wondering whether they need to change camps to have their publishing needs met.

One point worth clarifying is that PageMaker will not run on the equipment many think of as the IBM PC. PageMaker runs under Microsoft Windows, which requires an 80286 CPU for minimum performance, so 8 million PC and PC XT users can not run PageMaker.

Similarly, PageMaker 2.0 for the Mac is a heavy-duty upgrade that runs best on the Macintosh Plus and the newer SEs and IIs. It will not run on an old 128K Mac and performance may be unsatisfactory on a 512K Mac.

New desktop publishers, therefore, are still faced with a new equipment purchase, and the question of which brand to buy is more pertinent than ever.

With inimitable style, Armonk, N.Y.-based IBM has responded to the hot desktop-publishing market by announcing the SolutionPac, a line of computers intended to beat out the Apple line in that market. However, the new configuration will not be available until fall.

Meanwhile, IBM's PS/2 Model 60, with its streamlined internal design, 3.5-inch disks, new video capabilities, Micro Channel expansion bus and a peppy 10-MHz 80286 CPU, clearly offers a decided improvement in technology and performance over IBM's current AT line.

Still, the 32-bit architecture of the Macintosh and its operating-system design maintain an advantage over Big Blue's products for use in desktop publishing.

Does PageMaker perform comparably on both machines? Has IBM responded successfully to market demand? Is it true desktop publishers are now free to choose their equipment independently of software considerations? To answer these questions, we tested critical PageMaker functions on an IBM PS/2 Model 60 and a Macintosh SE.

Our comparisons show performance is slightly faster on the Mac SE than on the IBM PS/2 Model 60. And while the time to perform critical functions was only slightly slower on the IBM, the net difference could add up to sluggishness.

## The tests

To test PageMaker's performance on the two machines, we designed an eight-page newsletter containing elements common to business publications.

The newsletter includes two fonts, Times and Avant Garde, in various sizes and styles. Text was imported from Microsoft Word 3.0 on the Mac and Windows Write on the IBM. The silhouette of a building on Page 3 of the newsletter was created in MacDraw on the Mac and Windows DRAW! on the IBM. The three charts on Page 6 were created using Excel on the Mac and Lotus 1-2-3 on the IBM.

The Adobe Illustrator and MacPaint images on pages 1, 5 and 8 were created on the Mac and transferred for use in PageMaker on the IBM. Page 4's scanned image was created using a Microtek scanner, with Versacolor software on the Mac and Eystar on the IBM.

Using this newsletter as a benchmark test, we timed the activities occurring most frequently in the preparation of any publication, such as opening and closing the file, printing on an Apple LaserWriter Plus and redrawing the screen when changing from the Fit in Window view to Actual size, an operation performed frequently during production.

Another frequent operation is placing text. For this we timed the flow of our table of contents into a column. Each test was run three times.

Figure 1 shows that the test results are fairly close, but the Mac gained a slight edge.

The results do not, however, tell the whole story. There are at least two other important areas to consider in comparing the product on both machines.

One is that PageMaker's features on one machine are not identical to those on the other. Secondly, since desktop publishing involves the compatibility of several applications in creating a desktop-publishing system, we must look at the other applications available in both the PC and Macintosh environments.

## Features

Most PageMaker features are available for both the IBM and the Mac. The product looks the same on both machines, with most of the same menu commands and many of the same keyboard alternatives to menu commands. PageMaker on the IBM uses keyboard commands provided by Windows when possible, so commands for "Cut," "Copy" and "Paste" differ from the Mac version, as do commands for

Continued on next page.

## SIDE-BY-SIDE COMPARISON OF DOCUMENTS CREATED WITH PAGEMAKER ON THE MAC SE AND IBM PS/2

Macintosh SE

IBM PS/2 Model 60



Adobe Illustrator art created on the Mac, transferred to PageMaker



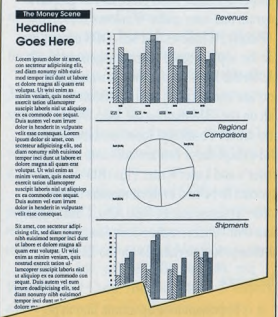
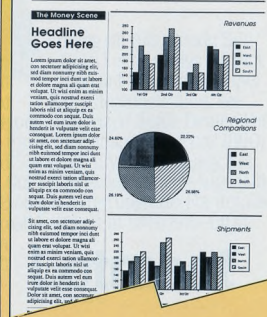
Picture of building was created on MacDraw on the Mac and Windows Draw on the PS/2

## MacWEEK BENCHMARK TEST

| IBM PS/2      | Time 1 | Time 2 | Time 3 | Average (min/sec) |
|---------------|--------|--------|--------|-------------------|
| Print file    | 15.43  | 12.30  | 12.08  | 13.27             |
| Open file     | 10.56  | 10.62  | 11.82  | 11.00             |
| Save file     | 3.78   | 5.06   | 3.84   | 4.23              |
| Pour text     | 5.25   | 2.86   | 3.14   | 3.75              |
| Screen redraw | 2.08   | 2.86   | 2.60   | 2.51              |

| Macintosh SE  | Time 1 | Time 2 | Time 3 | Average (min/sec) |
|---------------|--------|--------|--------|-------------------|
| Print file    | 13.10  | 12.47  | 12.31  | 12.63             |
| Open file     | 6.41   | 6.08   | 5.92   | 6.14              |
| Save file     | 3.92   | 3.93   | 3.05   | 3.63              |
| Pour file     | 2.07   | 2.59   | 2.12   | 2.26              |
| Screen redraw | 2.17   | 2.49   | 2.25   | 2.30              |



Excel produced more comprehensive charts on the Mac than Lotus 1-2-3 on the IBM

*Continued from previous page.*

character styles, such as bold and italic.

The keyboard commands for changing views of the page have been changed from Version 1.2 on the Macintosh so that PageMaker 2.0 matches the IBM version exactly. The IBM's function keys offer a richer keyboard command structure than the Mac keyboard, and the menus in Windows can be popped down and commands issued with keystrokes rather than with a mouse. PageMaker on the IBM, however, does require using a mouse for complete program functionality.

While PageMaker is similar on both machines, the new Macintosh version benefited from being developed after the IBM version; it contains an additional feature not available on the IBM. The "Export" command allows text placed and formatted in PageMaker to be saved to disk as a text or Word 3.0 file, with formatting intact.

#### Environment

While PageMaker looks and feels the same on both the IBM and the Mac, it does not operate in a void; its performance is dependent upon the operating system in which it functions, as well as the richness and ease-of-use of the auxiliary applications used with it.

Microsoft Windows provides the IBM with the graphical interface that has become standard in the personal computing industry. Both Windows' and the Mac's operating system are derivatives of the interface developed at Xerox PARC. Both use icons, windows, pop-down menus, dialogue boxes, scroll bars and a mouse. Windows' distinct advantage over the Mac is its sophisticated memory management, which provides a kind of multitasking. For example, Windows Write can run in one window while PageMaker runs in another window on-screen.

Windows' greatest drawback is its sluggish performance on existing IBM PS hardware. As noted, it requires an 80286 CPU for minimum performance. And even running on a 10-MHz PS/2, our tests suggest performance does not match that available on the lower-priced Macintosh SE.

Another big drawback for Windows is the limited number of existing applications. PageMaker is the first major application program to be coded under Windows. Though there are other packages on the market, virtually no high-performance word processor or graphics program that runs under Windows is available.

Finally, Windows and MS-DOS cannot provide the sophisticated font management available on the Mac. As a result, downloadable fonts are considerably more difficult to work with on the IBM than on the Mac. Further, there are no PostScript fonts available for the IBM except those that are built into the LaserWriter's and LaserWriter Plus' ROM. It is expected to be two to three months before Adobe Systems Inc. of Palo Alto, Calif., or any other font vendor, makes downloadable PostScript fonts available for the IBM.

#### The future

It is important to keep a time line in perspective regarding IBM's new product line and its relationship to desktop publishing. The PS/2

Model 80, which uses an Intel 80386 CPU, is not yet available. Meanwhile, our tests indicate that Apple's mid-range Macintosh SE offers superior performance to IBM's current top-of-the-line Model 60.

Further, the acceptance of Windows as a standard environment for IBM applications is expected to be strongly influenced by the advancement of the new operating system, OS/2. This will include Windows as a basic kernel of the operating system, allowing applications to use its features without performance

penalty.

Application developers are not expected to receive OS/2 tool kits until fall. Microsoft projects the first significant application may appear by the spring of 1988, with no substantial library of applications available for as much as two years later.

In spite of the current shortcomings on the IBM side for desktop publishers, it remains too early to predict who will win the hardware wars, whose machines will be sitting on most publishers' desks.

The advantages of the Mac environment may be blurred in the smokescreen of advertising hype that we can expect from IBM during the next few months. On the other hand, the fact that IBM users are still faced with a new equipment purchase in order to support desktop publishing may be the critical pebble in this David-meets-Goliath contest. The next "battle," to be reported in an upcoming issue of MacWEEK, will be the comparison between the IBM Model 80, running at up to 20 MHz, and Apple's Macintosh II, running a Motorola

# Starting August 1 to have great ideas. Just infinitely eas

Ever since paper replaced cave walls as man's favorite vehicle for expression, the attempt to communicate ideas has been an enduring source of frustration.

That frustration has just been eased dramatically.

Letraset introduces Ready, Set, Go! 3.1—an enhanced version of what InfoWorld called "the new champion among Macintosh desktop publishing programs."

To put it simply, Ready, Set,

Go! 3.1 is the easiest, fastest, most creative way yet devised of helping you organize, visualize and edit your thoughts onto professional-quality pages.

In fact, it removes any meaningful distinction between what you can do at your desk and what might otherwise require large budgets, long lead times and a studio full of designers.

The technically inclined will be pleased to note that it has a

## Products for the Mac to be exhibited at COMDEX

A variety of companies will exhibit and demonstrate products for the Macintosh at COMDEX/Spring '87 this week in Atlanta.

**Abaton Technology Corp. (Booth 3414)** will show its newest product, MultiTalk. The hardware/software company will demonstrate how MultiTalk works with a "mini, modem, LaserWriter and four Macs," says Dave Miller, product support. The MultiTalk box is an AppleTalk network.

In addition, three Macintosh-compatible scanners and Abaton's Drive 525, which allows a PC user to transfer files between PCs and Macs, will be shown.

**Avatar Technologies** will be in **Booth 4122; CMS Complete Management Systems** in **Booth 4122; and Automated Language Processing Systems** in **Booth 3534**.

**AST Research Inc. (Booth RM303)** will demonstrate the Mac286, a coprocessor pack-

age that allows Macintosh II users to run unmodified MS-DOS applications at IBM PC AT speeds and is a self-contained 80286-based microcomputer with 1 Mbyte of RAM, a DMA controller and a socket for an optional 8287 math coprocessor.

The Mac86, which is similar to the Mac286, will be displayed. It is an 8086-based coprocessor board for the SE that enables users to run MS-DOS application software at speeds rivaling those of an PC XT. The boards support manipulating documents in both the Macintosh and MS-DOS environments.

In addition, two new products will be announced. SuperScan, which runs with the TurboScan, is a graphics-editing software system that provides full-page, high-resolution image-scanning and editing.

The other product, the fAST/20, is a hard disk subsystem for the SE. This 20-Mbyte hard-disk drive was designed to take advantage of the enhanced capabilities of the Mac SE and II.

The drive features three powerful program utilities, a Small Computer System Interface (SCSI) port and 1:1 interleave operation.

**Cornerstone Technology Inc. (Booth 3227)** will show a full line of engineering and publishing workstation-enhancement products for the Macintosh II.

The Mac1600 families of monochrome graphics subsystems with display resolutions of 1,600 by 1,280 pixels, up to 16 levels of grey, and a 67-Hz refresh rate will be demonstrated with PageMaker, AutoCad, Ventura Publisher, Microsoft Windows and UNIX.

**Dest Corp. (Booth 3751)**, a manufacturer of automatic document scanners for business and government, will show its multifunctional scanner products for the Macintosh Plus. Text, line art and photographs can be automatically input for use in word-processing and desktop-publishing applications.

Dest scanners are software programmable, offer 300-dpi resolution and are easy to install and operate.

**Everex Systems Inc. (Booth 1852)** will exhibit disk and tape systems for the Macintosh. **Micrographic Images Corp. (Booth 2805)** will demonstrate the MegaScreen II for the Macintosh Plus and 512K, and the MegaScreen SE for the Macintosh SE.

Both hardware products are productivity tools for desktop publishing. MegaScreen's external monitor allows increased display of the Macintosh at 1,024- by-900-pixels resolution, 526 percent of the Macintosh display.

**Hayes Microcomputer Products, Inc.** will be in **Booth 1040**, and **Presentation Technologies** will be in **Booth 5137**.

**Sigma Designs (Booth 424)** will show its recently-released, highest-resolution monitor available for the Macintosh SE, the LaserView Display System.

The LaserView offers resolution of 1664 dots by 1,200 lines in non-interlaced mode and has a paper-white phosphor screen.

The LaserView is available in two configurations, 15-inch and 19-inch.

A new product, LaserView Display System for the Macintosh II, will be announced.

**Priam Corp.'s Systems Division (Booth 314)** will introduce its fast, hard-disk storage systems for the Mac Plus, SE and II.

**Princeton Graphics Systems (Booth 614)** will show the recently released LS-300 Desktop Image Scanner.

Available with an optional OCR software package, the LS-300 reads and stores typewritten pages. The scanner works with the Macintosh when an interface called Mac Scan is used.

**Rodime Inc.** will be in **Booth 1440**, and **WordPerfect Corp. (Booth 1640)** will display a new version of its WordPerfect word-processing software for the Macintosh. ■

# 1, it won't be any easier ier to express them.



unique block architecture that enables you to envision the finished page before it's finished.

Integrated word processing with real-time hyphenation that lets you create and design text and image simultaneously. Plus such essential tools as arbitrary runarounds, custom page sizes, style sheets and support for high-resolution graphics.

For those more concerned with the ultimate outcome of

these features, Ready, Set, Go! 3.1 will help you make a raw concept blossom into a newsletter of finished elegance. Transform random brainstorming into a report of symphonic coherence. Or create a dazzling business presentation from a jumble of brilliant insights.

And although other software packages may talk about

doing all this, Ready, Set, Go! 3.1 is the only one that can put it down on paper.

For a demonstration, see your Authorized Apple Dealer. For the dealer nearest you, call (800) 255-2550. If you buy Ready, Set, Go! 3.0 between June 1-August 11, you get a free upgrade. For details, call Letraset at (201) 845-6100.

**Letraset®**  
ESSELTE

# PUMPING OUT THE PAGES

## The Desktop Publishing Contenders



“The new page-layout programs are out, and PageMaker is no longer the only game in town. Ready,Set,Go! 3 has plenty of fans, and a new competitor, Quark XPress, is muscling its way into the ring.”

In offices across the land, desktop publishing means newsletters, reports and even periodicals that once required outside production are now done in-house quickly and inexpensively.

For the computer industry, the booming publishing market is a major contributor to this year's revival of sales and profits. But for the Macintosh, desktop publishing has had even greater significance—not just revival, but survival. Two years ago, with sales sluggish and developers hesitant, the Mac's prospects were not bright. Then came the LaserWriter and desktop publishing, and with them an entree to the business market. The software was elegant, the hard copy stunning, and the savings immediate and substantial. The Mac found a niche.

Now the machine has grown beyond that, but desktop publishing remains the key to the Mac's current popularity and future prospects. In recent months, a new generation of page-layout programs has appeared, and this week MacWEEK covers three of the leaders: PageMaker 2.0, Quark XPress and Ready,Set,Go! 3.

### PageMaker 2.0

☆☆☆

Aldus Corp.  
411 First Ave. Suite 200  
Seattle, Wash. 98104  
(206) 622-5500  
**\$390** (street price); **\$495** (list price)

*The leader in desktop publishing since its release two years ago, PageMaker is back in a new version that is faster, more robust and full of useful enhancements.*

With the release of PageMaker 2.0, Aldus Corp. delivers its first major software upgrade in more than a year. Completely rewritten, the new release retains the look and feel of previous versions, but offers a substantial increase in versatility and reliability.

#### Features

PageMaker 2.0 is laden with new features:

- Automatic or manual kerning (adjusting letter spacing to improve appearance), in one-

twenty-fourth-of-an-em increments;

- Automatic hyphenation, based on a 110,000-word main dictionary and a 1,300-word user-defined dictionary;

- Ability to handle files of up to 128 pages;

- Ability to make pages as small as a postage stamp or as large as 17 by 22 inches;

- A much-improved tab ruler.

- A new “drag-place” routine that permits sizing of text blocks and graphics as they are placed on the page, regardless of current column guides;

- Corner handles that make it easy to reshape text blocks.

PageMaker 2.0 seems far less buggy in handling text than preceding versions, but like its predecessors, it is not designed for serious word processing. Its text tool works fine for making headlines, captions and corrections, but with large amounts of text the program slows down noticeably. There is still no built-in spelling checker.

Instead of beefing up the program's text-editing capabilities, Aldus has emphasized



RUDY VANDERLANS

with its recently-released counterpart for the MS-DOS world. Aldus says the programs share 80 percent of their code. The result is that pages created on PC PageMaker can be transferred directly to the Mac with all text and bit-mapped graphics maintained. Only object-oriented graphics are lost.

Though still no speed demon, PageMaker is noticeably faster than before. But the best news about the new release is a dramatic increase in reliability. Veteran desktop publishers will find relief from the system errors encountered so often when editing text in Version 1.2. We have reports of highly illustrated, 50-page publications laid out without a single system failure.

For the 50,000 users of PageMaker 1.2, the downside of the new release may be its partial incompatibility with files created in the previous version. Changes in the way PageMaker calculates letter spacing and leading will make files look quite different.

#### Ease of use

PageMaker 2.0 is as easy to learn as Version 1.2. It retains the familiar layout-table metaphor and adheres closely to the standard Macintosh interface. Several additions to the program make it easier to use. A "Select All" command selects every element on a page or all text blocks that make up a single story. Nearly all menu commands have keyboard equivalents, in most cases identical to those used by Microsoft Word. Veterans of PageMaker 1.2 may have to adjust to some changes in their favorite shortcuts. The "Facing Pages" option, which was a menu selection, now requires a trip to the "Page Setup..." dialog box. On the other hand, it is now possible to edit the facing pages in this reduced view.

PageMaker is designed for small jobs requiring complex and varied formats. Setting up a long document with repetitive formats soon becomes tiresome. In some ways Ready,Set,Go! and XPress, as well as batch-oriented programs like Ventura Publisher for IBM hardware, make such jobs easier than with PageMaker.

#### Documentation

The documentation for PageMaker 2.0 is superb. A Quick Reference Guide, a 12-page New Features Summary and a 15-page Installation Guide are included along with a 314-page users' manual (helpfully marked off into sections with tabbed dividers), a 134-page reference manual, and Aldus' 60-page "Basic Design Guide." All the manuals are clear, concise and easy to use, and there are ample illustrations and highlighted tips.

PageMaker also provides on-line assistance

through Guidance, a Desk Accessory shipped with the program. The Help file — actually a hypertext document created in OWL International's Guide program — consists of interactive screens that can be explored by mouse-clicking on topics of interest.

#### Support

Aldus offers 45 days of free technical support to all registered users of PageMaker 2.0, including owners of Version 1.2 who have recently upgraded. Technical assistance is available by toll call from 8 a.m. to 5 p.m., Pacific Standard Time, Monday through Friday. We have contacted Aldus a number of times about problems. Although we seldom get through to a technical support person on the first call, the friendly and knowledgeable staff is very good about returning phone calls within a few hours.

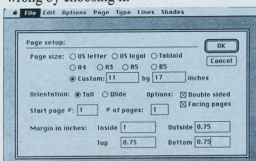
Registered users of PageMaker receive a free lifetime subscription to "The Desktop Publisher," a bimonthly newsletter, and free product replacement during the 90-day warranty period. Aldus also offers an extended support program. For \$75 a year, registered users receive unlimited telephone support with a toll-free number, a subscription to Aldus' quarterly technical bulletin and a special rate on future releases of PageMaker.

#### Recommendations

PageMaker 2.0 retains the elegance of the previous versions without most of the quirks that infuriated frequent users.

For registered owners, the upgrade is well worth the \$75 Aldus asks. First-time buyers, facing a \$495 price tag, should consider their options carefully, for PageMaker is no longer the only game in town: Quark XPress boasts features still missing from this release. Ready,Set,Go! 3 has speed, power and a lower price, and both have features that make repetitive jobs easier. PageMaker, moreover, still lacks some text- and graphics-handling capabilities many users had hoped for in this release.

Still, PageMaker is now the grand old man of desktop-publishing software, and the new version is graceful and mature. It is not the ultimate in desktop publishing, but you won't go wrong by choosing it.



PageMaker allows the user to specify page size, up to 11 by 17 inches, when beginning a new document.

### Ready,Set,Go! 3

Letraset USA

40 Eisenhower Drive  
Paramus, N.J. 07653  
(201) 845-6100

**\$165** (street price); **\$395** (list price)

*Speedy, easy to use and relatively inexpensive. Ready, Set, Go! 3 is the value leader in the desktop-publishing field.*

Ready,Set,Go! has charged back into serious contention with its latest release. Introduced at the end of 1986 by Manhattan Graphics and now marketed by Letraset Inc., Version 3.0 is a complete rewrite of the program that effectively eliminates all the limitations of earlier versions. Ready,Set,Go! 3 is fast, flexible and easy to use. It misses (for the moment, anyway) a few features that competitors have recently added, but it has all the tools necessary to do 90 percent of desktop-publishing tasks.

#### Features

The new Ready,Set,Go! retains a block-based architecture to page design. Every article or picture is contained within a block created by the appropriate tool.

Ready,Set,Go! 3 is one of the first desktop-publishing programs to offer an integrated word processor. Word-processing functions include a 70,000-word spelling checker, search and replace, and text glossaries. A "Get Text" command facilitates importation of files in ASCII, MacWrite or Microsoft Word (1.05 only) formats. The program's spelling checker is fast but primitive: It simply highlights words it doesn't recognize.

Ready,Set,Go! 3 incorporates a number of important refinements that improve typographic quality. Hyphenation occurs instantaneously as copy is typed or pasted in. The proprietary hyphenation algorithm, based on linguistic principles, is amazingly fast. Kerning — the ability to control spacing between individual letters — can be either automatic, based on PostScript font metrics or manual (also called spot kerning).

The "linker tool" allows the creation of a text chain by just clicking in several text blocks. Text placed in the first linked block will automatically flow into the following blocks. An "Insert Page" command duplicates the format of a previous page, links and all, on one or more new pages. When combined with the linker tool, the "Insert Page" command makes the creation of long documents virtually effortless.

*Continued on next page.*

compatibility with other programs. PageMaker 2.0 is the first page-layout program to accept files from T/Maker Co.'s WriteNow and Microsoft Word 3.0. With the new "Export..." command, PageMaker even allows copy edited during layout to be saved in Word 3.0 format or in other formats if developers provide an appropriate "export filter."

Graphics handling has been improved but remains deficient. The new version handles not only MacPaint- and MacDraw-type graphics, but also PostScript documents (in the encapsulated format used by Adobe Illustrator) and scanned images in Tag Image File Format (TIFF). Scrapbook images can be imported with the "Place..." command. A stretching option permits reducing or enlarging bit-mapped graphics in increments corresponding to the printer's resolution.

What is missing is a feature implemented in a limited way in Ready,Set,Go! and more fully in Quark XPress: the ability to run text around graphics.

PageMaker 2.0 reads documents created

Continued from previous page.

Bit-mapped or object-oriented graphics (PICT), can be incorporated directly into Ready,Set,Go! 3. Inserted graphics can be cropped on-screen, but scaling requires typing in horizontal and vertical scaling factors—a slow, albeit accurate, process. PostScript programs—but not encapsulated PostScript files such as those generated by Adobe Illustrator—can be embedded in the publication. Scanned images can be imported, but only as bit-mapped files.

To facilitate layout, Ready,Set,Go! 3

employs a grid system. With "Snap To" turned on, text and graphic blocks adhere to the edges of non-printing rectangles as they are created. The program comes with eight preset grids, but a "Grid Setup" option allows complete customization. Only one grid can be used per document, but grids are easily overridden by de-selecting "Snap To." Because grids work in both horizontal and vertical dimensions, layout of any type of document is quick and easy.

Ready,Set,Go! 3's "Run Around" feature provides the ability to flow text around rectangular objects. Text runaround is a very useful

tool for adding graphics to documents.

Graphic accents include 39 fill and pen patterns, hair lines, several styles of double lines and dashed lines. A MacDraw-like command eases object alignment.

The ability to open multiple documents makes it easy to copy and paste elements or even whole pages between documents.

The number of open documents is limited only by system memory.

#### Ease of use

Ready,Set,Go! 3 is very quick. It is virtually

impossible to type ahead of the program.

Although some users may find the column-guide metaphor preferable, Ready,Set,Go! 3's block approach is very easy to master.

Ready,Set,Go! 3's speed and simplicity generally make it a pleasure to use. A few minor details still need to be addressed: The scroll bars do not move one screen at a time as they are supposed to; changing views is not position sensitive; tabs are unnecessarily complex; the zero mark on the rulers cannot be changed; and error messages are sorely lacking. The program can be made to crash, but, on the whole, it is remarkably robust.

#### Documentation

The manual supplied with Ready,Set,Go! 3 sports a unique magazine concept. The information provided may not be enough, however. Letraset has promised a new manual.

#### Support

Technical support for Ready,Set,Go! 3 is provided toll-free to registered users. The Paramus, N.J.-based Letraset staff is very courteous and answered questions quickly and correctly.

#### Recommendations

Ready,Set,Go! 3 offers a lot of features that

# Five Mice

## And Other Rave Reviews

**"...recognizable as superior—**incredible typographical control...for the corporate publisher, it might be one of the only choices...graphic handling in XPress is exceptional...not only more functionality but more ease of use..."

—MacTimes, March-April '87

**"(ttttt) ...light years ahead—**Quark XPress is a superb product...a major step forward in the evolution of desktop publishing...makes true professional quality page layout easy...XPress is a real find..."

—MacUser, May '87

**"...everyone is talking about this one—**before you decide on anything, take a gander at XPress from Quark...an impressive list of features...the most serious competitor to anything out there..."

—Personal Publishing, March '87

**"...integrates advanced word processing, precision typesetting, and a flexible layout system with color support."**

—MacApple, April '87

**"Shoot-out winner!"**

Quark XPress was selected as the best all-around desktop publishing software at the Eighth Annual National Computer Graphics Association Conference in March '87.

**"XPress does everything but bind publications in leather."**

—Computer ACCESS, March '87

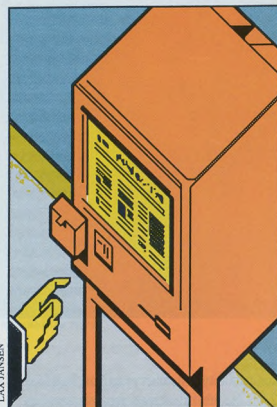
Now Showing On A Screen Near You

The Electronic Publishing System  
All The Critics Are Raving About—

## QuarkXPress

800-543-7711

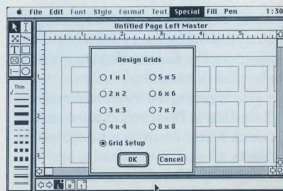
All layout and typesetting on this page was produced using QuarkXPress.



should be of interest to those who need to create long documents. Although Letraset recently raised the price to \$395, Ready,Set,Go! 3 remains the value leader among the desktop-publishing packages.

Continued on next page.

Ready,Set,Go! 3's "Design Grids" command brings up a window from which the user can select from pre-formatted grid patterns or call up the "Grid Setup" dialog box to create a custom grid.



Continued from previous page.

## Quark XPress

### Quark Inc.

☆☆☆

2525 W. Evans No. 220  
Denver, Colo. 80219  
(303) 934-2211

\$555 (street price); \$695 (list price)

*A new entrant in the desktop-publishing race, XPress is an impressive package, but it is expensive and heavily copy protected.*

At the MacWorld Expo, Quark Inc. demonstrated an impressive new desktop-publishing program. XPress is a feature-laden software package that will appeal to organizations needing fine control over line and letter spacing, support for encapsulated PostScript files and the ability to run text around irregularly shaped graphics.

### Features

Quark XPress is a desktop-publishing hybrid. Like Aldus' PageMaker it uses column and page guides. From Manhattan Graphics' Ready,Set,Go!, XPress borrows the block architecture, which Quark refers to as boxes, with very accurate object positioning.

Beyond these characteristics, however, are many refinements not found in either competitor. Using "Modify," for example, one can specify whether boxes are transparent, opaque (white) or one of a variety of background shades and colors. Creating sidebars is easy with a variable text inset (the blank space around all four sides of a text box, just inside the box) and the ability to automatically draw a frame around a text box.

Automatic kerning, using PostScript font metrics, and manual (spot) kerning are fully supported. Values for letter spacing can be specified in fractions of an em space. Since em spaces are proportional to a font size, tracking and kerning remain in correct proportion regardless of point size chosen. The program supports point sizes in one-point increments from two to 500 points. Leading can be specified in any increment.

XPress will accept either manual hyphens or automatically break words using a hyphenation algorithm. Hyphenation rules may be overridden via an exception dictionary. It is also possible to control the minimum size of words to be hyphenated.

A useful feature is the ability to horizontally scale type in any percentage. This makes it possible to condense or stretch typefaces to achieve special effects. Text can be shaded in five levels of gray. XPress can run text around irregularly shaped bit-mapped or object-oriented graphics. Picture boxes also will accept graphics from programs that produce encapsulated PostScript files. The PICT portion of the PostScript file can be positioned, scaled and cropped on screen.

Word-processing functions include a spelling checker with the capability to create custom dictionaries, tabs with optional leaders and a "Find/Change" command that searches and replaces special characters.

Continued on next page.



PageMaker 2.0



XPress 1.02



ReadySetGo! 3.0

### GENERAL

|                           |                                 |                       |                       |
|---------------------------|---------------------------------|-----------------------|-----------------------|
| Copy Protection           | ✓                               | ✓                     | ✓                     |
| Revert to Saved Copy      | ✓                               | ✓                     | ✓                     |
| Export Selected Text Only | ✓                               | ✓                     | ✓                     |
| Import Files              | ASCII, MacWrite, Word, WriteNow | ASCII, MacWrite, Word | ASCII, MacWrite, Word |
| Export Files              | Text only, Word 3.0             |                       | Text only             |
| Maximum Number of Pages   | 128                             | 2000                  | Depends on memory     |
| Clear (Edit Feature)      | ✓                               |                       | ✓                     |

### PAGE LAYOUT

|                                        |                              |                              |                                |
|----------------------------------------|------------------------------|------------------------------|--------------------------------|
| Edit Facing Pages                      | ✓                            | ✓                            | ✓                              |
| Automatic Text Runaround — Rectangular | ✓                            | ✓                            | ✓                              |
| Automatic Text Runaround — Irregular   | ✓                            | ✓                            | ✓                              |
| Rulers — Inches, Picas, Centimeters    | ✓                            | ✓                            | ✓                              |
| Zero Ruler Lock                        | ✓                            | ✓                            | ✓                              |
| Left, Right, Center, Decimal           | Left, Right, Center, Decimal | Left, Right, Center, Decimal | Left, Right, Center, Justified |
| — Maximum Tab Stops                    | 20                           | 20                           | 9                              |
| Delete/Insert Pages                    | ✓                            | ✓                            | ✓                              |
| Master Pages                           | Right, Left                  | Right, Left                  | Right, Left                    |
| Zooming/Reduction Percentages          | 200, 100, 75, 50, Fit Window | 200, 100, 75, 50, Fit Window | 200, 100, 75, 50, Fit Window   |
| Scroll Bars/Grabber Hand               | ✓                            | ✓                            | ✓                              |
| Column Guides                          | ✓                            | ✓                            | ✓                              |
| Grid                                   | ✓                            | ✓                            | ✓                              |
| Set Margins                            | ✓                            | ✓                            | ✓                              |
| Select All                             | ✓                            | ✓                            | ✓                              |
| Go to Page                             | ✓                            | ✓                            | ✓                              |
| Bring to Front/Send to Back            | ✓                            | ✓                            | ✓                              |
| Automatic Page Numbering               | ✓                            | ✓                            | ✓                              |
| Set Page Number                        | ✓                            | ✓                            | ✓                              |
| Automatic Text Flow                    | ✓                            | ✓                            | ✓                              |
| Automatic Continued on Page . . .      | ✓                            | ✓                            | ✓                              |
| Block Linking                          | ✓                            | ✓                            | ✓                              |
| Block Overlays                         | ✓                            | ✓                            | ✓                              |
| Transparent/Opaque Blocks              | Transparent                  | ✓                            | ✓                              |

### WORD PROCESSING

|                                           |                         |                         |                               |
|-------------------------------------------|-------------------------|-------------------------|-------------------------------|
| Text                                      |                         |                         |                               |
| —Type Styles                              | A, B, C, D, E, F, G, H  | B, C, D, E, F, G        | B, C, D, E, F, G              |
| —Leading (Minimum Measurement)            | 0.5 points              | 0.001 points            | 1 point                       |
| —Kerning (Minimum Measurement)            | 1/24 em space           | 1/100 em space          | 1 point                       |
| —Horizontal Scaling                       | ✓                       | ✓                       | ✓                             |
| —Reverse Type                             | ✓                       | ✓                       | ✓                             |
| —Automatic Hyphenation                    | ✓                       | ✓                       | ✓                             |
| —Set Spacing Allowable for Justified Text | ✓                       | ✓                       | ✓                             |
| Paragraph                                 |                         |                         |                               |
| —Set Indents                              | Left, Right, First Line | Left, Right, First Line | Left, Right, Paragraph Indent |
| —Set Spacing Between Paragraphs           | ✓                       | ✓                       | ✓                             |
| Find/Replace                              | ✓                       | ✓                       | ✓                             |
| Text Inset                                | ✓                       | ✓                       | ✓                             |

### GRAPHICS

|                         |                           |               |               |
|-------------------------|---------------------------|---------------|---------------|
| Background Colors       |                           | 7             |               |
| Background Shades       | 6                         | 6             | 39            |
| Frame Styles            | 3                         |               | 3             |
| Import Files            | EPSF, TIFF, Bit Map, PICT | Bit Map, PICT | Bit Map, PICT |
| Number of Line Patterns | 9                         | 11            | 5             |
| Number of Line Widths   | 8                         | Variable      | 6             |
| Reverse Line            | ✓                         | ✓             | ✓             |

### PRINTING OPTIONS

|                              |   |   |   |
|------------------------------|---|---|---|
| Collate/Reverse Order        | ✓ | ✓ | ✓ |
| Color Separations            | ✓ | ✓ | ✓ |
| Mirror Image                 | ✓ | ✓ | ✓ |
| Registration Marks           | ✓ | ✓ | ✓ |
| Thumbnails                   | ✓ | ✓ | ✓ |
| Tiling (Automatic or Manual) | ✓ | ✓ | ✓ |

### OTHER

|                                   |            |           |           |
|-----------------------------------|------------|-----------|-----------|
| Spelling Dictionary Size          |            | 80000     | 72000     |
| Hyphenation Dictionary            | 110000     | Algorithm | Algorithm |
| Maximum Auxiliary Dictionary Size | 1300 words | Unlimited | Unlimited |
| Online Help                       | ✓          | ✓         | ✓         |

(A) All Caps/Small Caps, (B) Bold, (C) Italic, (D) Underline, (E) Outline, (F) Shadow, (G) Superscript, (H) Strikethru

Continued from previous page.

A variety of printing options include printing page sizes from 3 by 3 inches to 36 by 36 inches, automatic tiling, "Thumbnails" and automatic color separation. Users who develop forms with multiple lines will appreciate the "Step and Repeat" function. Finally, XPress has a transfer option that allows movement between programs without returning to the Finder.



LAX JANSEN

#### Ease of use

XPress follows the Macintosh interface closely, which makes it reasonably intuitive to use. It is easy to set up templates for documents since the locations of text and graphics can be specified beforehand.

Complex publications with many text chains can be designed and modified quickly by creating a default page — a feature that, admittedly, is not as easy to use as the competitors' master pages. Items that are included on the default page can be modified on any page in the document. However, when a change is made in a default page, it is not reflected on any of the previously created pages. The change must either be made manually on each page or the pages deleted and new ones with

the new default inserted in their place.

Unlike other desktop-publishing programs, XPress lacks a pasteboard. And while text and graphics within blocks can be moved, cutting and pasting entire objects between documents is not supported. XPress does offer an easy way to move entire pages between documents with the "Get Document" command.

Quark's support for color printing is commendable. Characters, backgrounds for text and graphics boxes, lines and frames (borders) can all include color specifications. Colors print on the ImageWriter II and automatic color separations can be produced with a LaserWriter or Linotronic typesetter. In extremely heavy use, one "end-of-file" and one "document-is-damaged" error were encountered. The manual makes no mention of error messages. XPress relies on Apple's print manager to print documents, which tends to slow printing with graphics or pages with a large quantity of text. XPress is copy protected.

#### Documentation

XPress' manual, a three-ring binder, includes two tutorial-like chapters, a detailed reference chapter discussing each command and function that is available in the program, a chapter about the frame editor and a short chapter discussing basic typesetting principles. There is also a good glossary that defines most of the terms used in the documentation, 21 short appendices and an index.

XPress has excellent on-line help. Information about any topic is available at all times by selecting from a help list resembling a table of contents under the Apple menu. The appendices include a summary of keyboard commands and a discussion of encapsulated PostScript files. A separate reference card that summarizes keyboard commands would improve the documentation.

#### Recommendations

Overall, XPress has a solid feel and all features work well. The program clearly demonstrates the attention to detail the Quark staff lavished on the project. XPress is an exciting, full-featured program that expands desktop publishing's horizons. If not for the prohibitive price, the less-than glitzy manual and copy protection, XPress would have earned four stars. ■

#### Font

Apple I  
Chicago  
Courier  
Cupertino  
✓ Geneva  
Helvetica  
Hollywood  
Kawasaki\*  
Monaco  
New York  
Stockholm  
Times  
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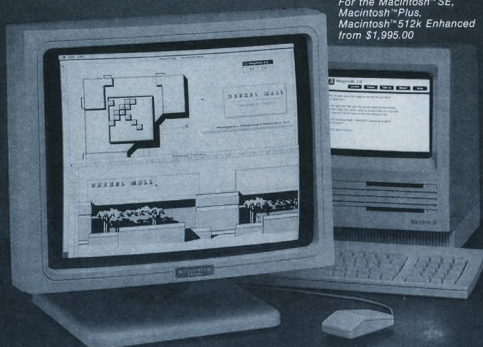
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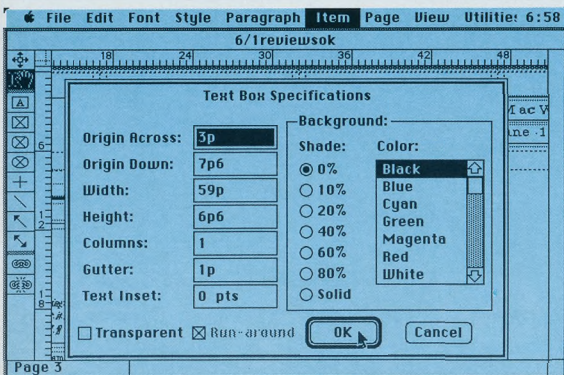
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The dialogue box that comes up with XPress' "Modify" command gives greater control over item placement.

# Focus:Desktop Publishing

BY BILL LANGENES

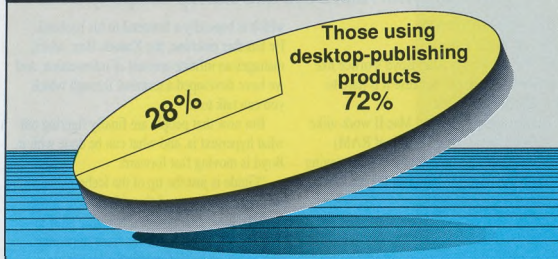
*Creative Strategies Research*

Among MacWEEK readers, nearly three-quarters use a desktop-publishing program, according to a telephone survey conducted exclusively for MacWEEK in April by Creative Strategies Research of Santa Clara, Calif.

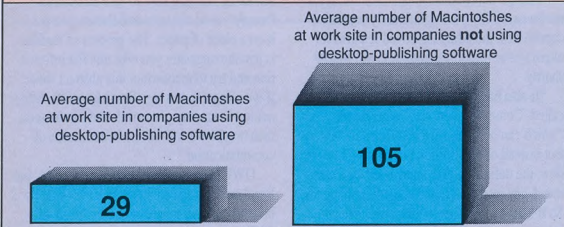
Seventy-two percent of the respondents said they produce documents with desktop-publishing products. The high incidence of electronic publishing use points to the exceptional popularity of this new computer application among corporate and other volume users of Macintoshes.

This figure takes on added importance when compared with current market estimates of desktop-publishing penetration. Available sales figures indicate there is only one desktop-publishing program for every nine or 10 Macintoshes. The data may also indicate desktop publishing software is shared by several users in the same work group.

## MAC USERS WORKING WITH DESKTOP-PUBLISHING PRODUCTS



## RELATION BETWEEN NUMBER OF MACS ON WORK SITE AND DESKTOP PUBLISHING



## Macs appeal most to smaller companies

The survey found a correlation between the number of Macintoshes at a work site and the use of a desktop-publishing program. The fewer Macs at a work site, the higher the probability that the respondent is a desktop publisher. Where the respondent is a user, the number of Macs averages 29. Where the respondent is not a user, there are three times as many Macs (105). The average number of employees of the firms surveyed was 374.

This correlates with other findings that desktop publishing appeals first and foremost to smaller companies that tend to be much more sensitive to printing costs. In larger organizations, where printing costs are dispersed among many departmental budgets, desktop publishing is making slower inroads. The greater separation in large organizations between work groups that produce text and those that do page layout may also be a contributing factor in the lower popularity of desktop publishing.

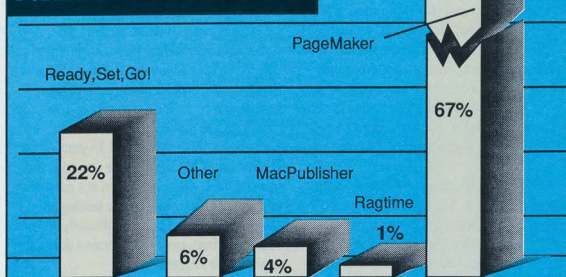
Communications firms are heavy users of desktop-publishing programs. Users also are found in retailing and business service firms.

## PageMaker retains commanding lead

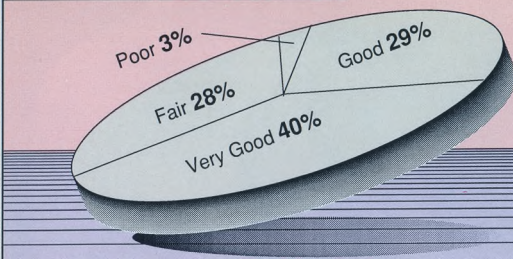
Among desktop-publishing users, PageMaker from Aldus Corp. of Seattle leads all Macintosh desktop-publishing programs in popularity with a 67-percent market share. The second most popular program is Ready,Set,Go! from Letraset of Paramus, N.J., with 22 percent. Four percent of the respondents said they use MacPublisher from Boston Software Publishers of Boston, while 1 percent use Ragtime, marketed by Orange Micro of Anaheim, Calif. Six percent used other programs or did not recall which brand they used.

Interestingly, the survey found that Ready,Set,Go! had greater appeal among larger companies than PageMaker. Ready,Set,Go! was used by companies with an average size of 41 employees, while PageMaker was used by companies with an average size of 28 employees. Ragtime and MacPublisher were used mostly by smaller organizations.

## POPULARITY OF DESKTOP-PUBLISHING SOFTWARE



## HOW USERS RATE PAGE-MAKEUP SOFTWARE



## Users give high marks to pagination software

Overall, user ratings of page-makeup software were positive, with 69 percent rating their programs "good" to "very good." Among users, 40 percent ranked their program "very good," 29 percent ranked it "good," 28 percent ranked it "fair" and 3 percent ranked it "poor." PageMaker and Ready,Set,Go! received the highest ratings with 43 percent and 48 percent, respectively, of respondents ranking the programs "very good."

As in the survey of word-processing users, desktop publishers at larger organizations tended to rate their desktop-publishing programs higher than those at smaller companies, further illustrating the better training and support large companies provide. ■

MarketWEEK surveys are conducted exclusively for MacWEEK by Creative Strategies Research, a high-technology research and consulting firm based in Santa Clara, Calif. For this survey, 510 U.S. corporate and other volume users were randomly selected from the MacWEEK subscriber database. Respondents were surveyed by telephone during April and 306 usable questionnaires were obtained, resulting in a 60-percent response rate. The industries and geographical distribution represented in the sampling reflect general U.S. demographics.

# Prepare to enter hypertext

*On the fast track with Alan Boyd and startup company OWL*

BY MICHAEL GOODWIN

MacWEEK Senior Editor

SEATTLE — Why is Alan Boyd's office like a hypertext document? Because it is hard to know where to look first.

There is a high-powered Mac II work-alike (a Levo Prodigy with 4 Mbytes of RAM) driving a big, high-resolution screen displaying a complicated menu of a tour of the National Art Gallery.

Next to that, a color TV monitor (displaying the Annunciation) is hooked to a videodisc player. Across the room there are several bottles of an obscure, single-malt Scotch whisky sitting on a high shelf next to a black motorcycle helmet. On the opposite wall there is a proof copy of the high-gloss, full-color ad for which the motorcycle helmet was bought; it shows a futuristic, helmeted rider, with a color computer display gleaming in his face-shield, over the headline: PREPARE TO ENTER HYPertext.

Boyd is a canny Scot who left a cushy job as manager of product acquisition for Microsoft Corp. of Redmond, Wash., to start OWL International, a small but growing multinational company — product development in Edinburgh, Scotland; sales and promotion in Bellevue, Wash.

Guide, OWL's hypertext processor for the Macintosh, has made the biggest splash of any new product in recent memory.

A flood of good reviews greeted Guide's release late in 1986, but in the software business, the good reviews that really count are green and fold. Ford Motor Co. is paying OWL a cool million to use Guide as the front end of its new automotive diagnostic system, which will go into hundreds of service centers. Aldus Corp. is using Guide as the help engine for its new Mac PageMaker 3.0. And around Seattle, where Aldus is located, people are saying Alan Boyd may be the next Bill Gates.

The only hard thing about hypertext is figuring out what it is. The term, as well as the concept, was invented by computer visionary Ted Nelson, who became interested in the way we read and write. Conventional text, he decided, was "one-dimensional" — frozen into a rigid structure that moved inevitably from beginning to end. Hypertext, designed to match the way we actually think, would be multidimensional text in which any word, phrase, paragraph, picture or picture element could be instantly connected with any other element in the document — or other documents.

For some time now, Nelson has been developing an ambitious, on-line hypertext database called Xanadu. Meanwhile, with his blessings, OWL has designed and released Guide, the first hypertext processor, allowing users to create hypertext documents in which readers can mouse and click on highlighted text or picture elements, called "buttons," to reveal the connected material.

"Ted has this notion of an infinite hypertext, where all information is in hypertext," Boyd explains. "We have personal hypertext,

which is basically a front end to his backend. He has this machine, the Xanadu Box, which manages an infinite amount of information, and we have developed a terminal through which you can talk to it."

But now that people are finally figuring out what hypertext is, and what can be done with it, Boyd is moving fast forward.

"Guide is just the tip of the iceberg," he says, gesturing toward the videodisc display.

"We have much more interesting stuff in the works. Guide 2.0 moves from hypertext into hypermedia. Information does not stop at the computer, so we must get out of the computer."

Boyd steps over to the Prodigy. "This is just a Guide document we created to access a commercial videodisc tour of the National Gallery. You click on the Annunciation here in the menu, and up it comes. Or you can do this." He mouses up to a heading that says "Guided Tour" and clicks; the video display blinks, clears and starts a full-motion video tour, with voice-over narration, of the National Gallery.

"If you want to browse," Boyd says, mousing to the upper-left corner of the Prodigy screen, "we have a time line here of all the paintings in the different galleries, organized chronologically, so if you want to see 20th century paintings, you click here." The videodisc screen flicks instantly to a Jackson Pollock abstract.

"And you go, Flemish, Dutch ..." The videodisc screen flashes from painting to painting as Boyd rolls the mouse around the menu.

"This is just a Guide document with user-embedded commands to talk to the laserdisc player," he says. "Very easy to write. We also have a control panel for fast-forward, frame-forward and back. We can access anything you can connect to the serial port."

Boyd was born in Scotland 35 years ago. He was still in his 20s when he arrived in the United States, where he worked at a number of odd and interesting jobs before landing at Microsoft in 1980. He is still officially on leave of absence from working to obtain a doctorate in physics in England.

"My job as manager of product acquisition at Microsoft was partly to keep tabs on the smartest developers, the people with real talent," he says. "I came across a little group in Edinburgh who had brought out a product called Expertise, the very first expert system for microcomputers."

"It was way too expensive — \$1,800 or something — so their marketing left something to be desired, but the technology behind it was interesting. The design was beautiful. No one had figured out how to put a reasonable user interface on an expert system shell, and they did it. The same people who had written Expertise had spun off to form a company called Office Workstations Ltd., OWL, and they had developed this prototype of Guide."

"When I first saw the program in July 1984, I took one look and started thinking: These people have expert system capabilities, and

they have just developed the first hypertext system, and if you put two and two together, you begin to see some real implications for CD-ROM technology."

"At that point, I could not convince Bill Gates that that was the way to go, so I left Microsoft and formed OWL International to market software by these guys."

OWL is really two companies: an OEM to develop CD-ROMs for industrial applications, like the Ford contract, and a retail operation that releases products like Guide for the Mac. Also available is Envelope, a hypertext "publishing" system that lets the user combine a hypertext document with a read-only version of Guide to create a single file that can be put on a disk or sent over a modem. The end user will not need Guide to read it; he or she can just click on it and go.

On June 1, OWL plans to release an MS-DOS version of Guide, running under Microsoft Windows, for \$200, plus a hypertext edition of Ted Nelson's "Literary Machines."

Version 2.0 of Mac Guide, with full hypermedia capability plus significantly expanded capabilities, including improved features for aligning and importing graphics, will follow shortly.

"It also has an entirely new feature set called 'Command Buttons,'" says Boyd, "which can be embedded just like note buttons. But instead of a definition popping up in a window, the definition gets interpreted by a command-line interpreter, and something happens. So if I send you a memo that says, 'We are having a meeting at 3:30 to go over Frank's spreadsheets,' when you click on the phrase 'Frank's spreadsheets,' Guide will load Excel and run Frank's spreadsheets. We can also do serial-port manipulation, to control a laserdisc, say. We can drive anything you can hook to your Mac serial port, including a mainframe computer."

"A lot of the problems with Guide 1.0, such as not being able to select a word and make it bold, for instance, are there for the sake of speed," says Boyd. "If we had included that, we would be as slow as MacWrite. But now

that the machines are getting faster, we can put that feature back into 2.0. It was always a trade-off. We tested four different versions of Guide before we released it, and we took features out left, right and center."

"We took more features out than we put in. We thought, 'Bring out something that is very fast, very easy to use, does not push people around. Get it out there as an introduction to the concept of hypertext, and then, when Version 2.0 comes out, put some of it back.'"

Boyd's enthusiasm for hypertext, and his notions about where it can take us, are catching. Clearly, he has no objection to turning a profit, but just beneath the businessman's surface lives a visionary in disguise.

"It is all about how to present documents on a computer screen," he says, "and that leads to very fundamental questions about what reading is, what writing is. Why do you have to spend so much time in school learning this stuff? Why is it so hard? There is something unnatural about it. We spend most of our early schooling learning how to take an abstract thought out of our head and flatten it to put it on a piece of paper. The process of reading is just the opposite; you take this flat information and try to reconstruct this abstract shape. If we can get text where the shape of the information is actually preserved, and can be seen, then maybe we will have a better means of communication."

OWL is working on several new items, but Boyd prefers to keep those under his hat. He is, however, happy to talk about the future of OWL and computers in more general terms.

"We have developed a hypertext system," he says, "and we have developed an expert system. By integrating those systems, we will have a future product, something on your computer, which will say, 'What is the problem, Dave?' Hypermedia is only the interface."

His eyes flash, making you wonder who was really behind the face-shield in the "Prepare to enter hypertext" ad.

"Computers are becoming what they were supposed to be in those 1930s science fiction stories," he says. "Information appliances." ■

Alan Boyd, founder of OWL International, says the Guide hypertext processor is just the tip of the iceberg.



*When It Has To Be Fast, Good & Inexpensive*



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## Apple taking steps to improve service, support for end users

Apple Computer Inc. is not ignoring complaints from end users regarding its level of service and support. Some steps have already been taken and discussion of other programs is under way within the firm, insiders say.

Perhaps the most dramatic step by Apple has been to require dealers to meet strict requirements if they want to sell the AppleShare file server and the Mac II.

"Dealers must be positioned effectively and successfully to sell and support the product," says a spokeswoman for Cupertino, Calif.-based Apple.

In order to qualify as a dealer of these two new products, stores must have at least two off-site sales representatives, previous experience selling communications products and at least one full-time employee providing service and support. While designed to boost Apple's credibility among corporate clients, many long-time, loyal Apple dealers are not thrilled with the tough requirements.

"We should not have to go through all this," says Alison Wells, manager of an Apple dealership in New York. Wells says she considers the investment in outside salespeople high in her market, where margins are still low. The new requirements will squeeze many of Apple's independent dealers, who have survived despite the recent proliferation

of chains. These independents constitute about 51 percent of Apple's dealer network.

But while Apple has become stricter with dealers, it also has become more accommodating with its user groups. Because computer owners often cannot get timely software updates from dealers, they have depended more on user groups to meet their needs, says Leon Ablon, president of a 1,200-member New York user group. Apple is making it work to its advantage. "What Apple is trying to do is use the groups to fill the gap."

Apple has made AppleLink, its internal electronic mail and message network, available to its 820 national user network, which have a total membership of about 30,000, at a discounted rate. For a nominal fee, the user groups may buy a license to distribute system software to their members. Sometimes, an Apple spokeswoman says, dealers bundle a one-year, free user-group membership with their products.

Still, more must be done if users are to receive the support they need, says Ralph Megna, president of a user group in Little Rock, Ark. Apple is working on the problem. It is developing software to streamline dealers' accounting and inventory procedures, thus leaving them with more time for service, he says. ■—By Richard Halstead

## DEALERS

*Continued from Page 11.*

relationship with the dealer and if the dealer is knowledgeable. But often this is not the case.

Apple recognizes that there are problems with user support and has taken steps to resolve them (see sidebar). Dealers also admit that there are tensions.

"I do not know if all of my customers have upgrades," says Alison Wells, manager of Adwell Communications, an Apple dealer in New York. If a customer requests an upgrade, they get it. But on the other hand, "we do not keep an active mailing list," she says. "It is too time consuming."

"I am sorry to admit we cannot do that either," says Gail Heimberg, manager of McGraw-Hill's Computer Store in New York. "We have neither the time nor the resources."

Observers agree that the problem could

worsen as Apple intensifies its effort to sell more complex equipment, like the AppleShare file server and the Mac II, to business users. "It was all right when Apple's customers were hobbyists or enthusiastic business users sneaking the product in the back door," Megna says. "The devotees did not need technical support."

But that has changed during the past three years, Megna says. "Now, business users are relying on the Macintosh as a tool that must perform every single day. They have to feel confident it will be repaired immediately if it goes down."

The increasing complexity of the technology may, however, be offset by a parallel increase in the sophistication of dealers. At least that's what Apple hopes. Then today's "Era of Good Feeling" between dealers and Apple will also rub off on users. ■

## ALDUS

*Continued from Page 11.*

the Apple market. An IBM PC version was made available in January.

The initial offering by Aldus will make 2.04 million shares available at about \$14 to \$16 per share. Comparably, Adobe first offered 500,000 shares at \$11 per share, and Interleaf opened with 2.65 million shares at \$10 each.

Aldus' peers have done well since going public. Less than one year later, Adobe stock has split once and is now selling for \$48 per share, while Interleaf stock reached \$20 per share last month. But selling desktop-publishing products is not a shoo-in for success, industry observers are quick to point out.

"Adobe and Aldus could not go public if they did not have something good to sell, whether it be desktop publishing or something else," says James Cavuoto, editor of Micropublishing Report, a Torrance, Calif.-based newsletter devoted to desktop publishing.

"They also happen to be very well-run," he says. "On the other hand, we also have seen that there are more than a handful of upstart desktop-publishing companies not doing so well. My only point is that being in this market does not necessarily make one a winner."

Aldus' move to go public also symbolizes the end of an era, say analysts. Smaller firms and startups will have a tougher time competing with established market leaders and heavy-

weight newcomers, like IBM, DEC and Wang.

With an established market, young companies will find that making alliances with larger corporations is the only way to come into the market successfully, says Kapoor. The majority of the market's future growth will be devoured by these large computer firms. IBM, for example, is just beginning to make inroads into the desktop-publishing market. In April, Big Blue announced its desktop-publishing system, which includes Aldus PageMaker and a version of Adobe's PostScript. The system will be available during the third quarter of this year.

Being on top also presents Aldus and Adobe with the challenge of staying there.

"The market is still wide open," says Steve Gold, Aldus' product manager for the Apple version of PageMaker. "In the PC industry, in particular, we do not want to think of it as a closed market. Standards are still evolving. Our response is to continue to evolve our product."

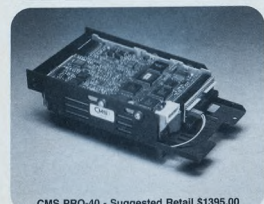
Analysts agree that Aldus cannot afford to stand still and ride on its reputation.

"The fact that Aldus is a kind of standard in desktop publishing today, since it's being offered by all the major vendors, is also a challenge," says Kapoor. To keep the lead, Aldus must provide updates that satisfy user needs.

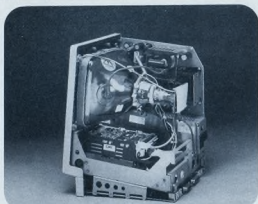
Analysts also indicate no other desktop-publishing software firm is in a position to make a public offering. ■

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## SCANNER

*Continued from Page 1.*

company Aldus Corp.

Though the basic price of ScanJet is low, users will be required to purchase an interface, which may come in the form of a plug-in card for the Macintosh SE and II. The form and pricing of the interface is still being worked out, an HP spokeswoman says. However, an IBM PC interface for ScanJet, a plug-in card, retails for \$495.

Also included with ScanJet will be a software package similar to the HP Scanning Gallery included with the PC version. Gallery lets users store data in file formats fully compatible with desktop publishing programs

like Aldus' PageMaker.

Because all the scanners are based on three engines, from Ricoh Corp., Microtek and Canon, the success of ScanJet will depend mostly on the price and quality of software for character recognition and what file types it supports, Wong says.

With prices falling from about \$2,500 in 1986 to below \$2,000 this year, Dataquest says it expects the scanner market to grow by 23,000 units this year, almost doubling the 1986 installed base of 13,000.

Says Wong: "Users are seeing that there are a lot more images out there than their software alone can create." ■

## MAC THE KNIFE

"Here it is, my dear Emily, the best thing in your life this week. I'm pushin' 9,600 baud and the afterburner's aflame," the download began. "Save it, Mac. What have you this week?" MacWEEK's sypop keyed in.

"The Knife-man cometh, madame."

The word on the streets and alleys, around the corner and up your block is that Apple has

finished the controller chip for the next revision of the Mac's motherboard and incorporated something code-named "Lumpy." Ol' Lumpy is an upgrade to the IWM — the Integrated Woz Machine — which mere mortals would call the disk controller. A nifty beast she be, however, physically looking like a null modem and allowing the Mac to dance with Apple II and IBM PS/2 disk formats.

Also from the Cupertino flats: There's an intentional worm of the semi-Trojan Horse variety in the Apple. Seems internal beta test copies of MacDraw are making the rounds

with a copy protection scheme imbedded inside the program. Each MacDraw copy has to handshake with the name of the user's LaserWriter's driver. No match? MacDraw starts a suicide erasure. Worry not, worry not. It's just to keep the beta versions from oozing through the Apple security net.

That net, though, has holes so big they might have been cut by a, ahem, knife. Some of the haute T-shirts around Apple are babbling: "Malibu. You Can Take It to the Beach." But can you? Malibu is Apple's often-seen and often-pulled-from-development laptop Mac.

The project was recently put back on a front burner, and it could be slated for an '88 delivery. However, Apple is carefully watching sales of other lap Macs, such as those from Colby and Dynamac, before launching, er, launching. In the meantime, one of Sculley's closest associates is riding Occam's razor and traveling with a lightweight DOS device to rest upon his thighs.

Another popular code name within Apple — pay attention, Em, pay attention — is "Decade." Quaint, no? Why "decade"? It's the next CPU platform for the 68020- and 68030-based machines aimed at the academic, engineering and scientific markets. Those motherboards are supposed to be good for 10 years, get it?

Ah, yes, names, names. Here's one you haven't seen on the retailers' shelves — National Semiconductor. The Semi wheels are rolling out the first-look copies of their 16-Mbyte memory board for the Mac II this week, then will begin shipping in mid-June. The add-on packs the board with a sweet 16 of 1-Mbyte chips. Product name: "8/16." Yeah, I know. Sexy handle, huh? Well, listen, don't bug the NSCers about it: A good name is hard to find.

As though "cord management" weren't a vexing enough problem, now it appears to the Mac-kado that all the nifty words have been copyrighted, trademarked, registered and logged-in with the Grand Pooh-bah of Marketing Dreams. Which reminds me...

Letraset's getting ready to take a shot at Adobe's Illustrator this summer with something called "The Realist." It's a painting program that can handle 256 gray tones. Of course, the eye can only pick out 18.5, but if you can do 256 in gray, 256 in color is money in the purse.

Onward. Latest release date of Ashton-Tate's dBASE in the Macintosh flavor? Sometime in August. Or September. Or October. Those dates sound familiar? Riiiiight, August. August 1986. MacExpo. Mac dBase being shown. "Be out any time now," they said.

Also said, this time by guys with big blue in their eyes and the striped initials on their calling cards, that the new PS/2 would block the cloners out of the futures market. Hope they didn't sell long. (Or is it short?) Seems the morning after IBM's Miami/New York ballyhoo in April, a major Texas clone maker is getting calls from suppliers of components for the PS/2 line. "You wanna buy some parts?" was the opening line.

Finally, coming in June to a theater NOT near you: Acius will start training Fourth Dimension certified developers in Cupertino, Calif., June 5-6.

Finally, finally. How's your married life, Emily? At least you're in SanFran and not Redmond, Wash., apparently a town of bereaved women. How's that, you ask? Take a look at the COMDEX Preview newspaper. Blurb says Comerstone Technology will demonstrate its products with "... Ventura Publisher, Microsoft Windows ..." Read it again.

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